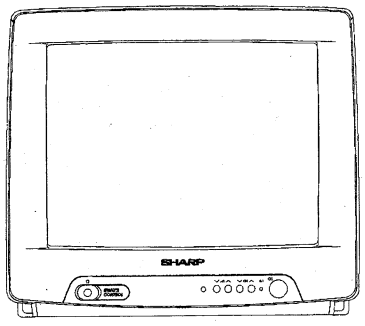
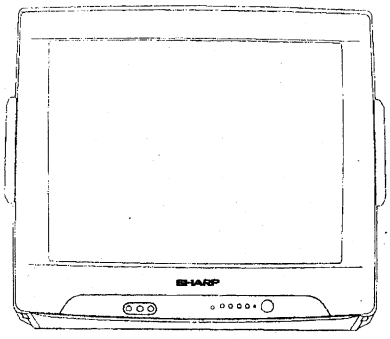
SHARP SERVICE MANUAL

SELD37DT25S/2

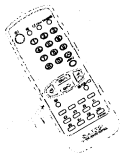
CA-1 CHASSIS



37DT-25S



54DT-25S



PAL/SECAM SYSTEM COLOUR TELEVISION

MODELS 37DT-25S 54DT-25S

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified be used.

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SHARP CORPORATION

ELECTRICAL SPECIFICATIONS

Aerial input Impedance ..... 75 ohm unbalanced
Convergence ..... Self Converging System
Focus ..... Bipotential electrostatic
Audio Power Output Rating
..... 2 Watt (M.P.O.)(37DT-25S)
4 Watt (M.P.O.)(54DT-25S)
Intermediate Frequencies
Picture IF Carrier Frequency ..... 38.9 MHz
Sound IF Carrier Frequency ..... 33.4 MHz
Colour Sub-Carrier Frequency ..... 34.47 MHz
(Normal)
Power Input ..... 220/240 Volts AC 50 Hz

Power Consumption ..... 38 Wh(37DT-25S)
50 Wh(54DT-25S)
Speaker Size ..... 8 cm (Round)(37DT-25S)
10 cm (Round)(54DT-25S)
Voice Coil Impedance ..... 32 ohms(37DT-25S)
16 ohms(54DT-25S)
Sweep Deflection ..... Magnetic
Tuning Ranges ..... 48.25 MHz-855.25 MHz
CATV Special channels

Specifications are subject to change without prior notice.

WARNING

The chassis in this receiver is partially hot. Use an isolation transformer between the line cord plug and power receptacle, when servicing this chassis.
To prevent electric shock, do not remove cover. No user - serviceable parts inside. Refer servicing to qualified service personnel.

IMPORTAMT SERVICE NOTES

Maintenance and repair of this receiver should be carried out by qualified service personnel only.

SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove static charge from it by connecting a 10 k ohm resistor in series with an insulated wire (such as a test probe) between picture tube ground tag and high voltage lead (AC line cord should be disconnected from AC outlet).

1. Picture tube in this receiver employs integral implosion protection.
2. Replace with tube of the same type number for continued safety.
3. Do not lift picture tube by the neck.
4. Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage completely.

X-RAY

This receiver is designed so that any X-Ray radiation is kept to an absolute minimum. Since certain malfunctions or servicing may produce potentially hazardous radiation with prolonged exposure at close range, the following precautions should be observed.

1. When repairing the circuit, be sure not to increase the high voltage to more than 30.0 kV (at beam 1000 μA) for the set.
2. To keep the set in a normal operation, be sure to make it function on 23.5 kV ± 1.5 kV (at beam 800 μA)(37DT-25S), 26.3 kV ±1.5 kV (at beam 800 μA)(54DT-25S), in the case of the set. The set has been factory adjusted to the above mentioned high voltage. If there is a possibility that the high voltage fluctuates as result of the repairs, never forget to check for such high voltage after the work.
3. Do not substitute a picture tube with unauthorized types or brands which may cause excess X-Ray radiation.

BEFORE RETURNING THE RECEIVER

Before returning the receiver to the user, perform the following safety checks.

1. Inspect all lead insulation to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc.

SERVICE ADJUSTMENT

■ SERVICE MODE FUNCTION

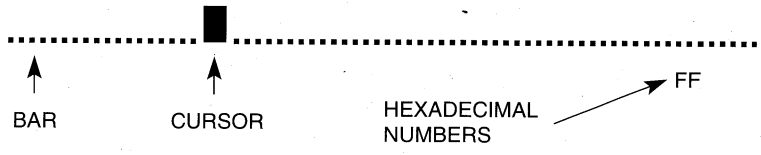
This mode function is provided to assist with the settings of those adjustments that may vary from one Picture Tube to another, or between models.

In order to use the Service Mode

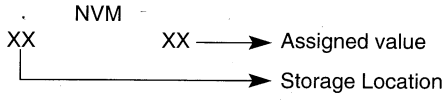
1. Press main switch to OFF.
2. Connect Test Pattern signal to antenna terminal.
3. Press ∨ ◿ and CH ∧ buttons and main switch to ON simultaneously.
4. –SERV–will appear on screen. Service mode is now entered.
5. Select adjustment using buttons ∧ CH ∨.
   To exit service mode, press main switch to OFF or press MENU button on R/C.

	Displayed on Screen	Hexadecimal Range	Function
	-SERV-		Indicates operative Service Mode.
a.	AGC	00 ~ 3F	Auto Gain Control.
b.	AFT	00 ~ 7F	Auto Frequency Control
c.	H-SHFT	00 ~ 3F	Horizontal Position shift
d.	V-SHFT	00 ~ 3F	Vertical Position shift.
e.	V-AMPL	00 ~ 3F	Vertical Amplitude shift.
f.	V-SLOP	00 ~ 3F	Vertical Symmetry alteration.
g.	V-DLY	00 ~ CF	VIDEO Delay.
h.	GAIN R	00 ~ 3F	Red Gain.
i.	GAIN G	00 ~ 3F	Green Gain.
j.	GAIN B	00 ~ 3F	Blue Gain.
k.	NVM		Access to NVM memory.

6. For "a" thru j selections.
   Adjustment to a selection can be made by pressing buttons ∧ ◿ ∨).
   A colour bar is displayed on the OSD to indicate the adjustment position, together with hexadecimal numbers (Not for GII adjustment).



For "k" Selection.
NVM storage location settings variants.



In order to have access to the desired storage location, buttons ∧ ◿ ∨ should be pressued, as required, to obtain a higher or lower location, respectively. Bear in mind that, for storage location indication a hexadecimal numerical system is used, instead of a decimal system.
0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, 10, 11, ...19, 1A, 1B, 1C, 1D, 1E,1F, 20, 21, ..., 99, 9A, 9B, 9C, 9D, 9E, 9F, A0, A1, ..., B0, ..., C0, ..., D0, ..., E0, ..., F0, F1, F2, F3, F4, F5, F6, F7, F8, F9, FA, FB, FC, FD, FE, FF.
From the last location FF to the first 00 can be reached by increasing and from first to last by decreasing. Once the storage location to be varied has been selected, its value can be modified by the bits that form part of the storage location numerical buttons, numbers [0] to [7], respectively. This switches its binary number from and between 0 and 1 each time one of the buttons is pressed.

$[0] = 2^0$ 1, $[1] = 2^1$=2, $[2] = 2^2$ = 4, ...

<table>
<tr><th>ADD (HEX)</th><th>DESCRIPTION</th></tr>
<tr><td>00</td><td>RED COLOUR TEMPERATURE</td></tr>
<tr><td>01</td><td>GREEN COLOUR TEMPERATURE</td></tr>
<tr><td>02</td><td>BLUE COLOUR TEMPERATURE</td></tr>
<tr><td>03</td><td>VERTICAL SHIFT</td></tr>
<tr><td>04</td><td>HORIZONTAL SHIFT</td></tr>
<tr><td>05</td><td>VERTICAL AMPLITUDE</td></tr>
<tr><td>06</td><td>VERTICAL SLOPE</td></tr>
<tr><td>07</td><td>LUMA DELAY PAL</td></tr>
<tr><td>08</td><td>LUMA DELAY SECAM</td></tr>
<tr><td>09</td><td>S-CORRECTION</td></tr>
<tr><td>0A</td><td>AGC</td></tr>
<tr><td>0B</td><td>OPTIONS:
<table>
<tr><td>ING_OSD</td><td>A_F</td><td>CHL</td><td>PAL</td><td>UHF</td><td>T_LOCK</td><td>AV-F</td><td>FP</td></tr>
<tr><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td></tr>
</table>
0: FP: SYSTEM B/G (0) - B/G+L, MESSAGE RECHERCHE (1)
1: AV FRONTAL: NOT INCLUDED (0) , INCLUDED (1)
2: TUNING LOCK (HOTEL): LOCKED+SWITCH-ON PR1 (1), NO LOCKED (0)
3: UHF-ONLY: BAND UHF (1) - ALL BANDS (0)
4: PAL ONLY (1), PAL+SECAM (0)
5: CHILD LOCK: CHILD LOCK ACTIVE (1) CHILD LOCK NO ACT (0)
6: AUTO FIRST: TUNING FIRST MENU: AUTO (1) MANUAL (0)
7: ING_OSD: OSD_INGLES (1) OSD-SYMBOL (0) VALUE=70H (37DT-25S), 70H (54DT-25S)</td></tr>
<tr><td>0C</td><td>AFT ADJUSTMENT VALUE (B/G, L SYSTEMS)</td></tr>
<tr><td>0D</td><td>AFT ADJUSTMENT VALUE (L' SYSTEM)</td></tr>
<tr><td>0E</td><td>MAXIMUM VOLUME LIMIT</td></tr>
<tr><td>0F</td><td>FIRM</td></tr>
<tr><td>10</td><td>RED COLOUR TEMPERATURE</td></tr>
<tr><td>11</td><td>GREEN COLOUR TEMPERATURE</td></tr>
<tr><td>12</td><td>BLUE COLOUR TEMPERATURE</td></tr>
<tr><td>13</td><td>VERTICAL SHIFT</td></tr>
<tr><td>14</td><td>HORIZONTAL SHIFT</td></tr>
<tr><td>15</td><td>VERTICAL AMPLITUDE</td></tr>
<tr><td>16</td><td>VERTICAL SLOPE</td></tr>
<tr><td>17</td><td>LUMA DELAY PAL</td></tr>
<tr><td>18</td><td>LUMA DELAY SECAM</td></tr>
<tr><td>19</td><td>S-CORRECTION</td></tr>
<tr><td>1A</td><td>AGC</td></tr>
</table>

<table>
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<tr><td>1F</td><td>FIRM</td></tr>
<tr><td>20</td><td>RED COLOUR TEMPERATURE</td></tr>
<tr><td>21</td><td>GREEN COLOUR TEMPERATURE</td></tr>
<tr><td>22</td><td>BLUE COLOUR TEMPERATURE</td></tr>
<tr><td>23</td><td>VERTICAL SHIFT</td></tr>
<tr><td>24</td><td>HORIZONTAL SHIFT</td></tr>
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<tr><td>2A</td><td>AGC</td></tr>
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<tr><td>2E</td><td>MAXIMUM VOLUME LIMIT</td></tr>
<tr><td>2F</td><td>FIRM</td></tr>
<tr><td>30</td><td>TABLE LONG</td></tr>
<tr><td>31</td><td>FIRM</td></tr>
<tr><td>32</td><td>AGING ON. AUTOMATIC SWITCH ON.</td></tr>
<tr><td>33</td><td>SWITCH ON DELAY TIME</td></tr>
</table>

34	VOLUME
35	CONTRAST
36	COLOUR
37	BRIGHTNESS
38	PEAKING (RANGE: 0-3FH)
39	ACTUAL PROGRAMM
3A	TV STATE ON/OFF
3B	HUE
3C	CONTRAST (FACTORY PRESET)
3D	COLOUR (FACTORY PRESET)
3E	BRIGHTNESS (FACTORY PRESET)
3F	PEAKING (RANGE: 0-3FH)(FACTORY PRESET)
40	ON TIMER LAST VALUE
41	OFF TIMER LAST VALUE
42	OSD STATE BIT 0: PICTURE NORM ON/OFF BIT 1: SCART/AV LOCKED BIT 2: FRONTAL LOCKED BIT 3: ROW 8/30 PERM.(RESERVED-PROG. INTERNALLY) BIT 4: PIN NUMBER OPTION (0-NOT APPEAR, 1-APPEAR) BIT 5: CLOCK STATE (PROGRAMMED INTERNALLY) BIT 6: ELIMINATE VERTICAL WHITE BARS IN MENUS BIT 7: (1) REAL_TIMER + ALARM / (0) ON_TIMER VALUE=51H (37DT-25S), 51H (54DT-25S)
43	BKGD USER'S CORRECTION (NOT USED IN THIS MODEL)
44	BKGD USER'S CORRECTION PRESET VALUE (NORMALIZED) (")
45	VOLTAGE LIMIT BETWEEN L'-L SYSTEM (MSB)
46	VOLTAGE LIMIT BETWEEN L'-L SYSTEM (LSB)
47	HORIZONTAL OSD OFFSET BIT 7: DIRECTION SIGN: (0) INCREASE (1) DECREASE BIT 6: DON'T CARE BIT 5 - BIT 0: OFFSET VALUE
48	PROG SEARCH SPEED ALL BAND -HIGH NIBBLE CMPLEMENTED-
49	PROG SEARCH SPEED (VHL BAND) -HIGH NIBBLE CMPLEMENTED-
4A	PROG SEARCH SPEED (VHL BAND) -HIGH NIBBLE CMPLEMENTED-
4B	PROG SEARCH SPEED (VHH BAND) -HIGH NIBBLE CMPLEMENTED-
4C	CHANNEL RANGE IN FACTORY AUTOINSTALL
4D	PASSWORD ON (1)/OFF (0)
4E	PASSWORD FIRST DIGIT
4F	PASSWORD SECOND DIGIT
50	PASSWORD THIRD DIGIT
51	PASSWORD FOURTH DIGIT
52	FREE

53	OSD WORD 1: BIT 0:OSD PROG SIZE. 0= LARGE (14") 1= SHORT (21") BIT 1:OSD PROG DISPLAYED TIME. 0=SHORT TIME / 1= LONG TIME	
54	RED REFERENCE FOR AUTO BKGD ADJUSTMENT	
55	GREEN REFERENCE FOR AUTO BKGD ADJUSTMENT	
56	BLUE REFERENCE FOR AUTO BKGD ADJUSTMENT	
57	CONTROL_2: OSO, VSD, CB, BLS, BKS, CS1, CS0, BB	VALUE= 09AH
58	CONTROL_3: HOB, BPS, ACL, CMB, AST, CL2, CL1, CL0	VALUE= 024H
59	VERTICAL ZOOM APPROX.	VALUE= 0DH
5A	VERTIVAL SCROLL APPROX.	VALUE= 020H
5B	CONTROL_0: INA, INB, INC, CCC-D, FOA, FOB, XA, XB	VALUE=01AH
5C	CONTROL_1: FORF, FORS, DL, STB, POC, CM2, CM1, CM0	VALUE=0C0H
5D	CONTROL_5: EVG, HCO, LBM, VID, STM, NCIN, VIM, AKB	VALUE=026H
5E	CONTROL_6: IFS, AFW, IE1, COR, RBL, MAT, PRD, SBL	VALUE=03CH
5F	CONTROL_7: EVSINC, EBS, FFI, HBL, GAI, IE2, DS, DSA	VALUE=0H
60	NOT USED	
61-FF	PROGRAMS (0-52)	
100-18Dh	PROGRAMS (53-99)	

■ PIF/AGC Adjustment

1. VCO + AFT Adjustment

1. Connect the output of SSG (Standard Signal Generator) to the tuner IF output terminal.
   - SSG output: 38.9 MHz (CW) ±5 kHz).
   - SSG output level: approx. 90 dBμV.
2. Enter into Service Mode.
3. Push CH ∧ until AFT appears.
4. Press ○┬ button on R/C. Setting is made automatically. During this setting the colour bar shall go from red to yellow. When setting is finished, colour bar disappears and B-STOP (bus stop) is shown on screen.
5. Switch set OFF and ON again, setting is now memorized.

2. RF-AGC Cut-In Adjustment (I2C BUS)

1. Receive the "COLOUR BAR" signal (Channel E-12).
   - Signal strength: 60 dBμV.
2. Enter into Service Mode.
3. Push CH ∧ until AGC appears.
4. Press ○┬ button on R/C. Setting is made automatically. During this setting the colour bar shall go from red to yellow. When setting is finished, colour bar disappears and B-STOP (bus stop) is shown on screen.
5. Switch set OFF and ON again, setting is now memorized.

■ Screen Adjustment

3. Focus Adjustment

1. Apply mains voltage of 220 V AC/50 Hz to TV.
2. Receive Phillips pattern signal to a level between 60 and 80 dBμV.
3. Set contrast to 10/10, brightness to 5/10 and colour 0/10.
4. Adjust focus potentiometer to obtain maximum definition.

4. G2 Adjustment

1. Apply mains voltage of 220 V AC/50 Hz to TV.
2. Receive MONOSCOPE PATTERN signal to a level between 60 and 80 dBμV.
3. Enter into Service Mode. Press the TEXT key of R/C and set to level.
4. Set to the point where the raster disappears on the screen VR of FBT.

■ GEOMETRY ADJUSTMENT PROCEDURE

1. H-SHFT

a) Receive Philips pattern signal.
b) When ◿/\ button is pressed, picture moves to the left.
c) When ◿\/ button is pressed, picture moves to the right.
d) Adjust the horizontal location to obtain picture centering (fig. 1)

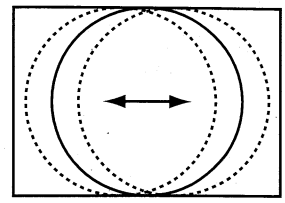


Fig.1

2. V-SHFT

a) Receive Philips pattern signal.
b) When ◿/\ button is pressed, picture moves up.
c) When ◿\/ button is pressed, picture moves down.
d) Adjust the horizontal location to obtain picture centering (fig. 2)

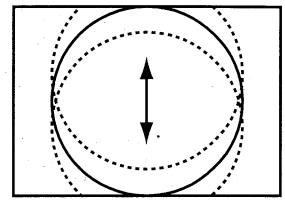


Fig.2

3. V-AMPL

a) Recive Philips pattern signal.
b) When ◿/\ button is pressed, vertical size of picture increases.
c) When ◿\/ button is pressed, vertical size of picture decreases.
d) Adjust the vertical size to obtain overscan (fig. 3).

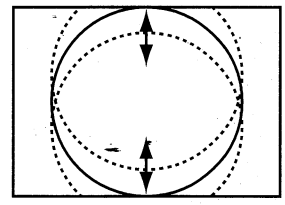


Fig.3

4. V-SLOP

a) Receive Philips pattern signal.
b) When ◿/\ button is pressed, upper picture scanning decreases and lower picture scanning increases.
c) When ◿\/ button is pressed, upper picture scanning increases and lower picture scanning decreases.
d) Adjust the vertical symmetry to obtain symmetrical scanning between upper and lower picture (fig. 4).

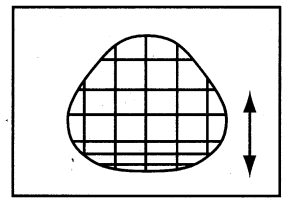


Fig.4

COLOUR ADJUSTMENT

5. V-DLY

a) Receive Philips pattern signal.
b) When ◿/\ button is pressed, luma phase delays.
c) When ◿\/ button is pressed, chroma phase delays.
d) Adjust the chroma-luma delay.

The following adjustments are only required when the Picture Tube is changed.

6. "GAIN R", "GAIN G", "GAIN B".

a) Adjust G2.
b) Tune in white card.
c) Adjust colour to minimum.
d) Position colourmeter in the center of screen.
e) Using brightness and contrast buttons, select a luminance of ≈ 120 nits.
f) Operate again in Service Mode and select location GAIN R, GAIN B to obtain colour coordinates:
X= 0.290 ± 0.015
Y= 0.284 ± 0.015
g) Exit Service Mode and check colour coordinates 'X' and 'Y' at 20 and 120 NITS. It may be necessary to repeat procedure.

NOTE:

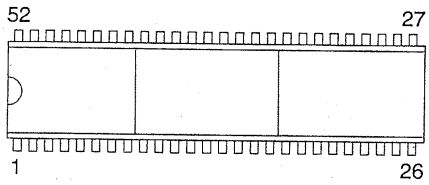
Locations: GAIN R alter 'X' coordinate; GAIN G alter the 'Y' coordinates; GAIN B alter the 'X' and 'Y'coordinates.

■ CHILD LOCK CANCEL

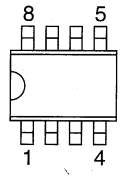
The following process describes how to cancel actual password (PIN) when the customer forgets code.

1. Switch ON TV set.
2. Press button ∨ on TV and ○┬ on R/C simultaneously.
3. Press MENU button on R/C to input menu.
4. Using buttons ∧ CH ∨ move to ○┬ position.
5. Press MENU button again.
6. Select PIN and input new PIN (Please do not forget it)
7. Select EXIT and press MENU button again.

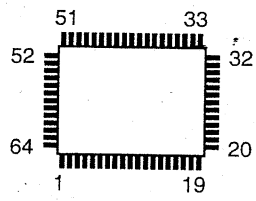
■ SOLID STATE DEVICE BASE DIAGRAM



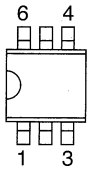
RH-IX1655BMNO(54DT-25S)
RH-IX1658BMNO(37DT-25S)



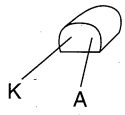
RH-IX1640BMZZ
(SMD COMPONENT)



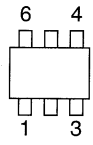
RH-IX1630BMZZ
(SMD COMPONENT)



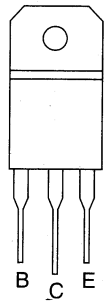
RH-FX0103BMZZ
(SMD COMPONENT)



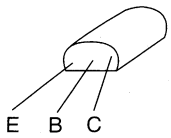
RH-IX0037CEZZ



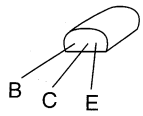
VHSMT1A/A//-1
(SMD COMPONENT)



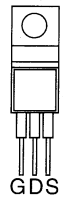
RH-TX0132BMZZ



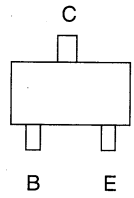
RH-TX0102BMZZ
RH-TX0104BMZZ
RH-TX0105BMZZ
RH-TX0142BMZZ
RH-TX0130BMZZ
RH-TX0154BMZZ



RH-TX0108BMZZ
RH-TX0112BMZZ
RH-TX0118BMZZ
RH-TX0131BMZZ
RH-TX0180BMZZ
RH-TX0140BMZZ
RH-TX0141BMZZ

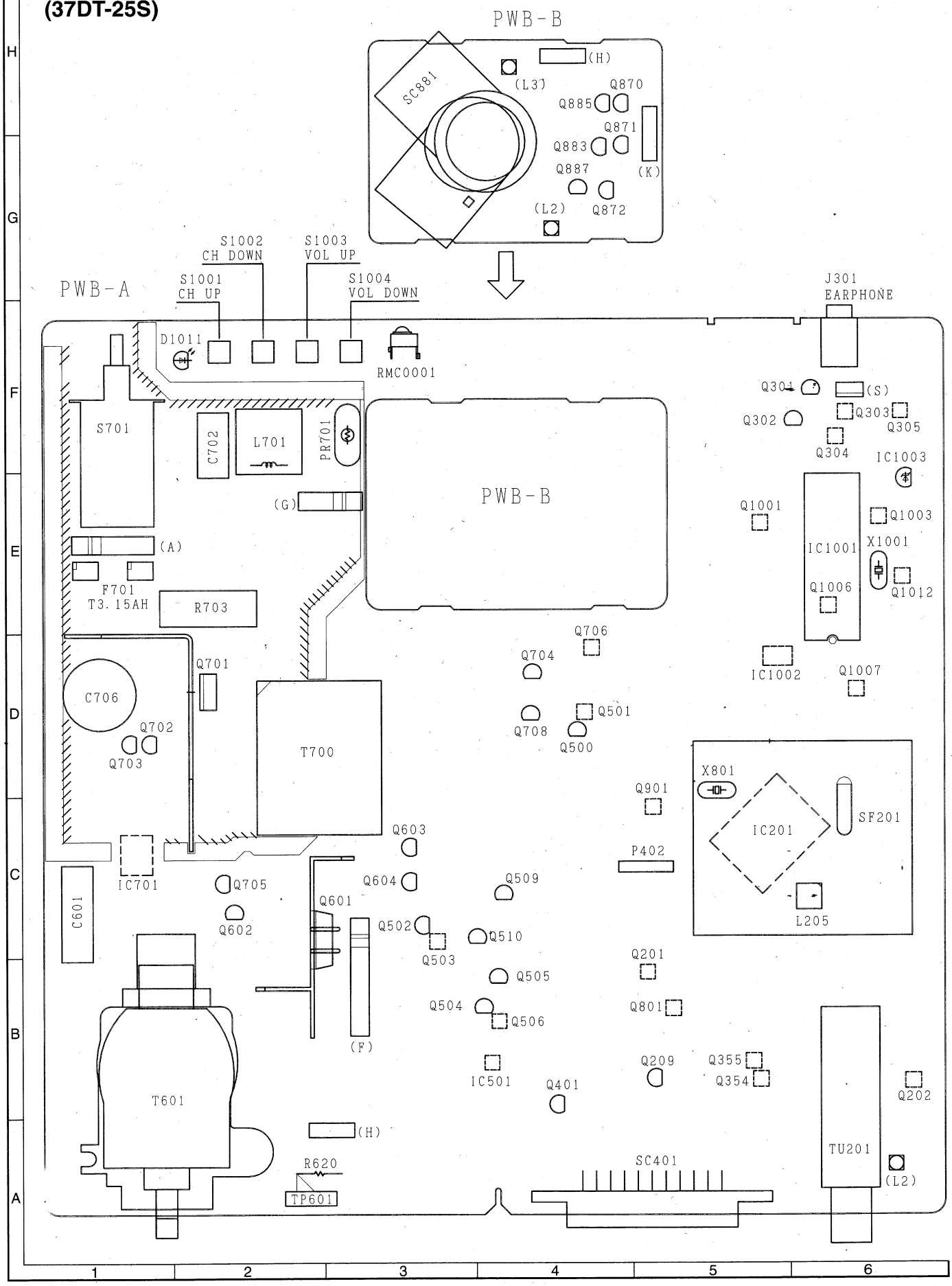


RH-TX0128BMZZ

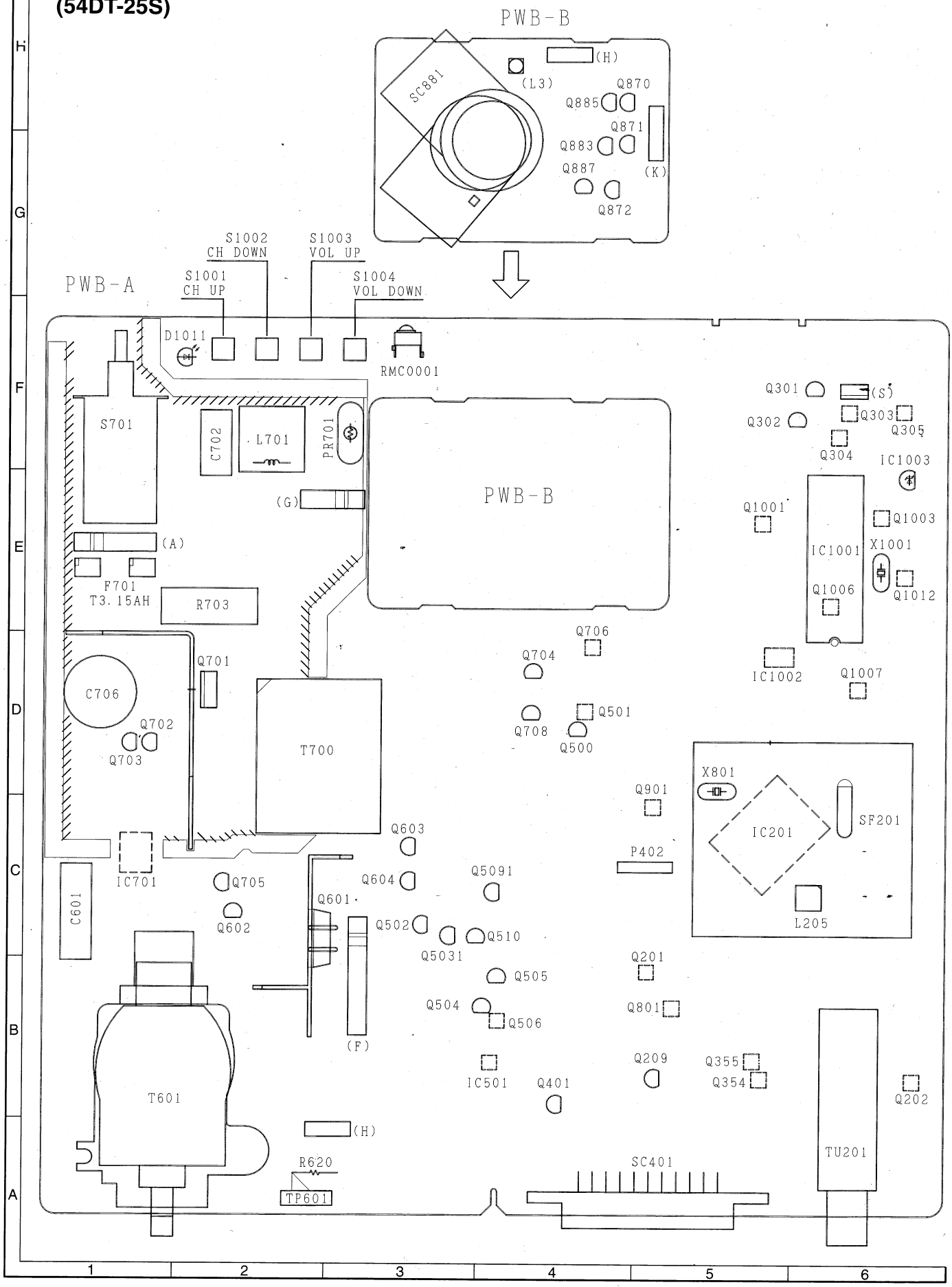


VS2SA1037KQ-1
VS2SC2412KQ-1
(SMD COMPONENT)
RH-TX0152BMZZ
RH-TX0153BMZZ
RH-TX0113BMZZ

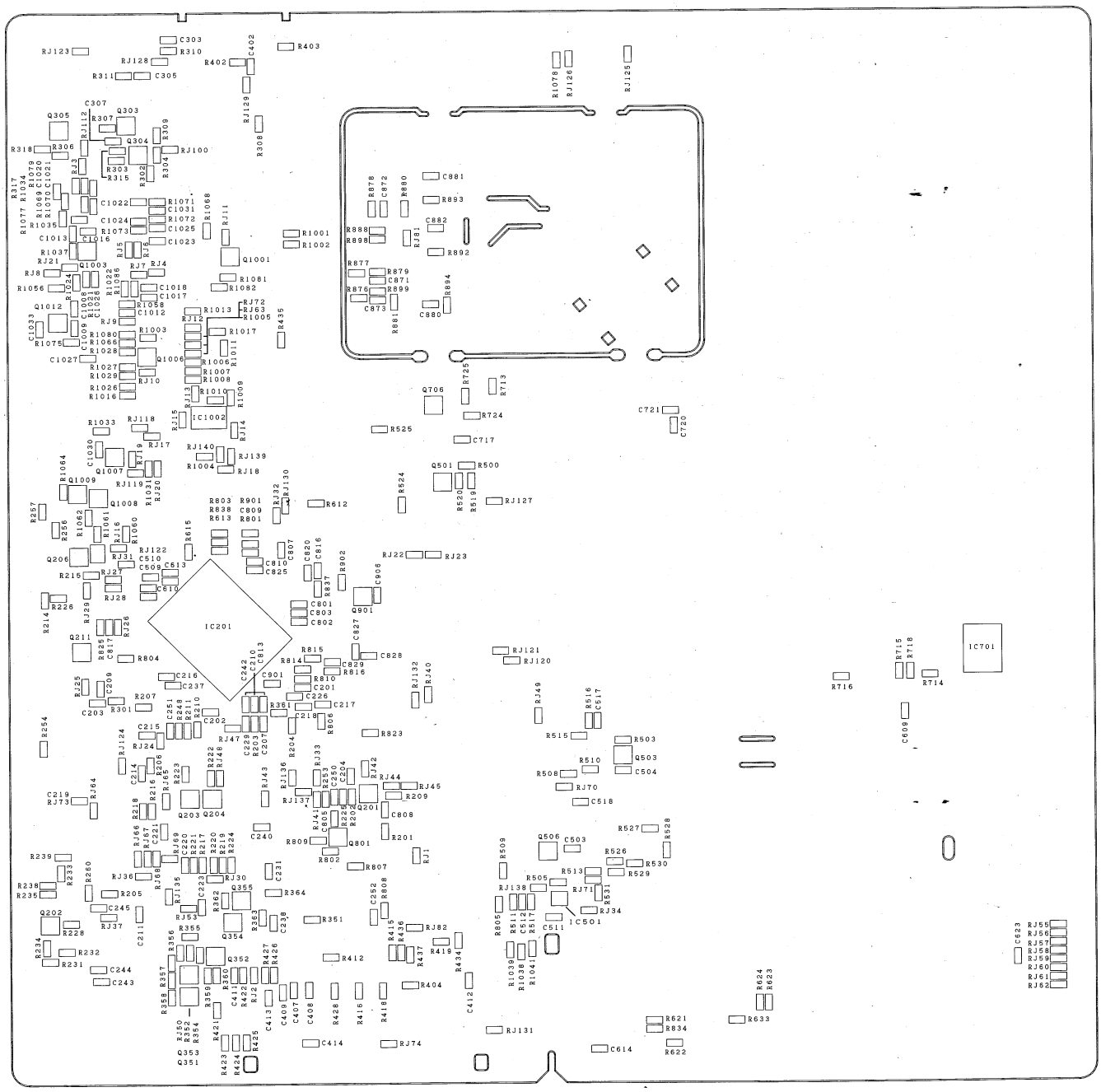
CHASSYS LAYOUT DIAGRAM
(37DT-25S)



CHASSYS LAYOUT DIAGRAM
(54DT-25S)



PRINTED WIRING BOARDS



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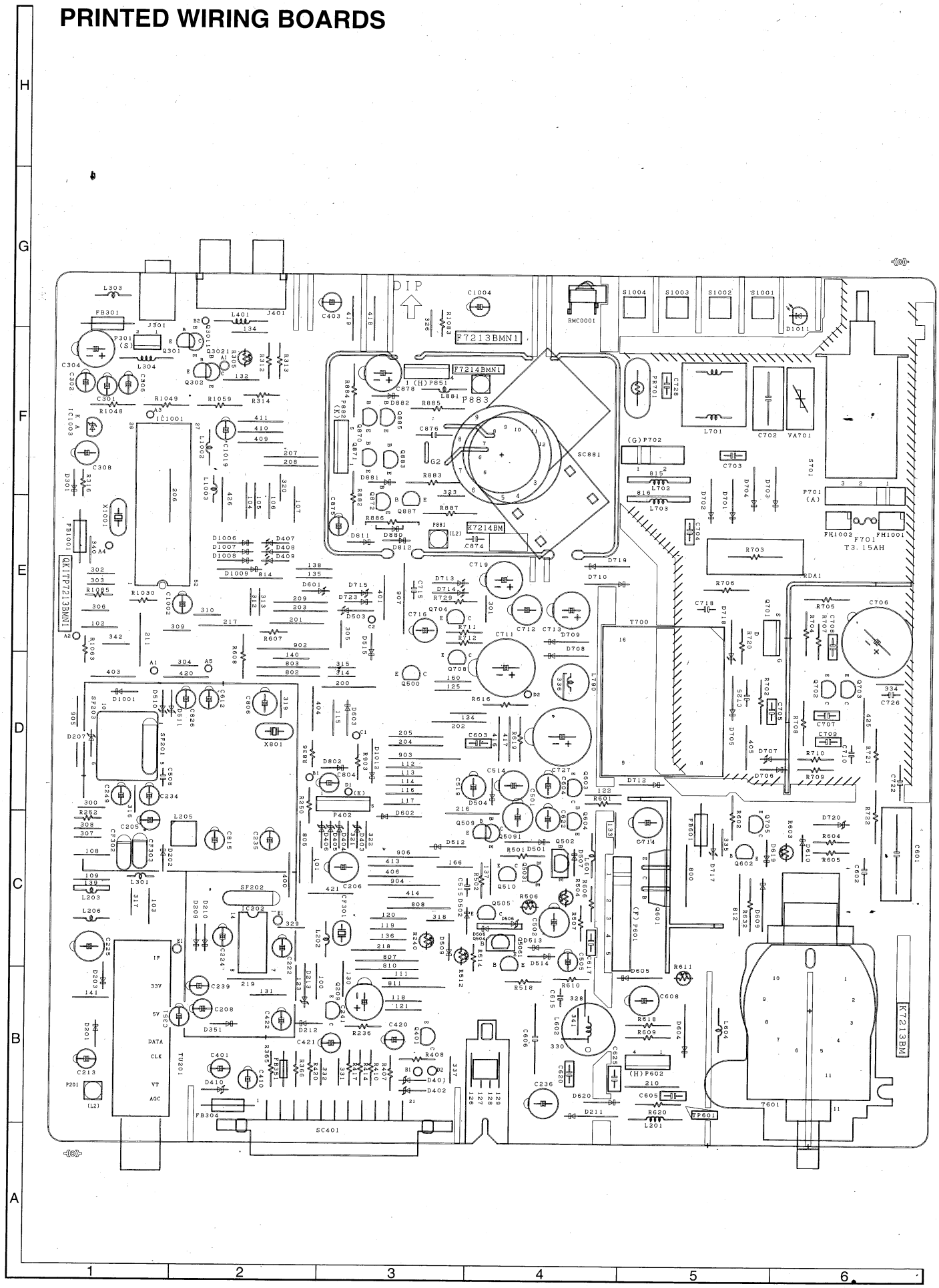


DESCRIPTION OF SCHEMATIC DIAGRAM

SAFETY NOTE:

1. DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACEING PARTS.
2. SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.

IMPORTANT SAFETY NOTICE:

PARTS MARKED WITH "⚠" ( ) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET, BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

SEVICE PRECAUTION:

THE AREA ENCLOSED BY THIS LINE (■ ■) IS DIRECTLY CONNECTED WITH AC MAINS VOLTAGE.
WHEN SERVICING THE AREA, CONNECT AN ISOLATING TRANSFORMER.
BETWEEN TV RECEIVER AND AC LINE TO ELIMINATE HAZARD OF ELECTRIC SHOCK.

NOTE:

1. The unit of resistance "ohm" is omitted (K+1000 ohms, M=Magaohm).
2. All resistors are 1/8 watt, unless otherwise noted.
3. All capacitors are μF, unless atherwise noted (P=μμF).
4. The capacitor with Part No. RC-FZ9XXXBMNJ is designed to withstand 63V.

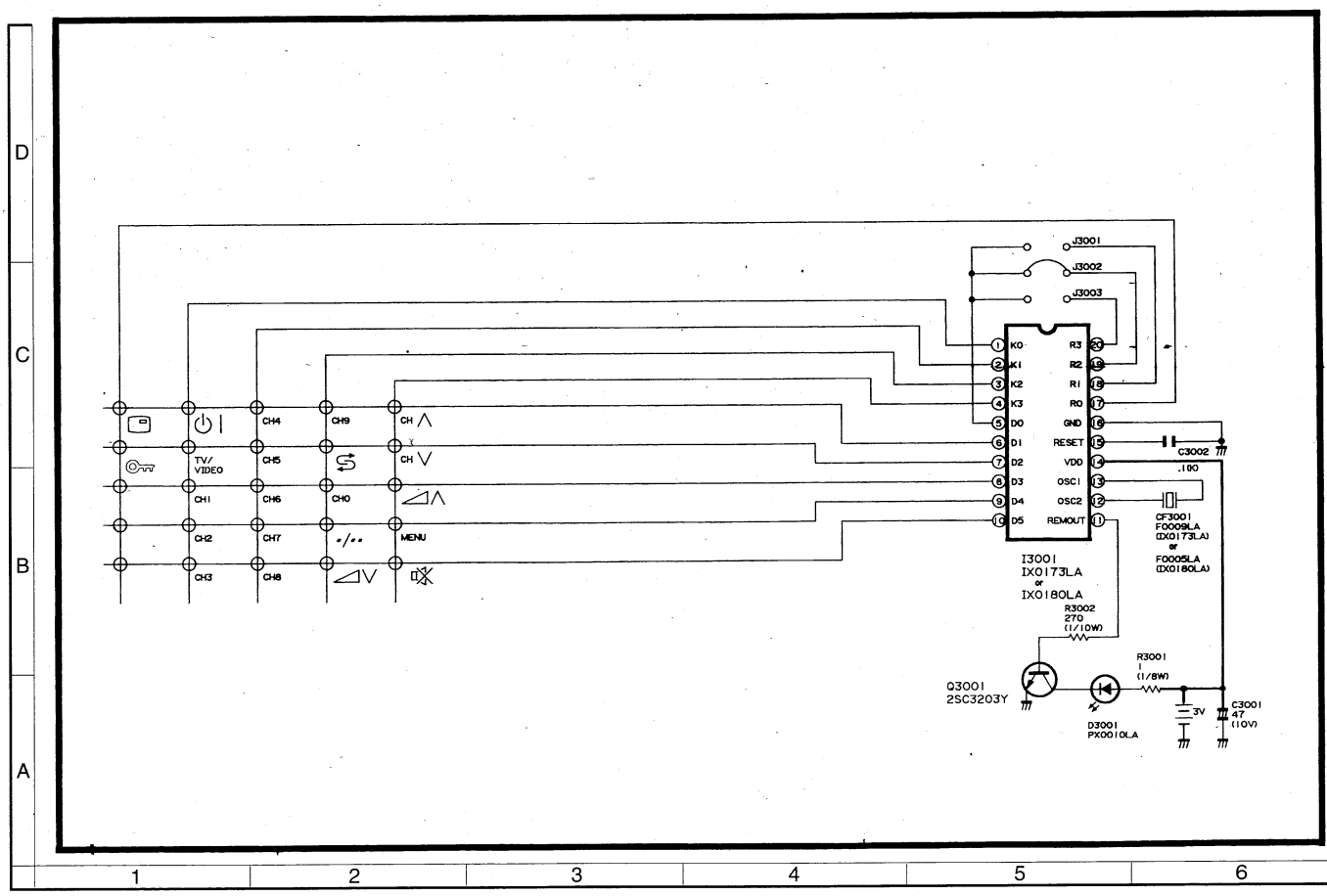
WAVEFORM MEASUREMET CONDITION

Colour bar generator signal of 70 dB from RF input.

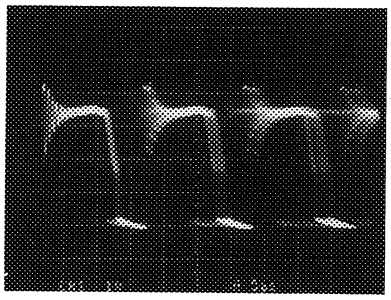
CAUTION

This circuit diagram is original one, therefore there may be a slight difference from yours.

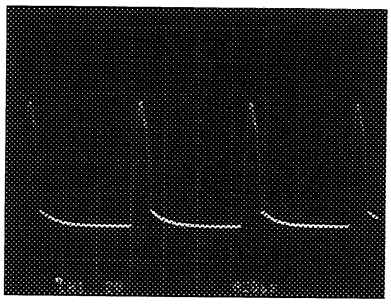
REMOTE CONTROL TRANSMITTER CIRCUIT



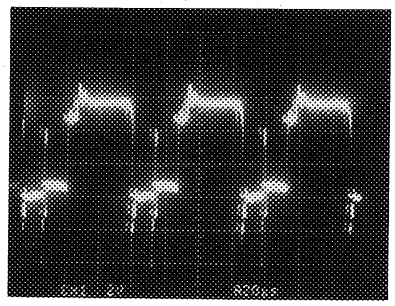
WAVE FORMS



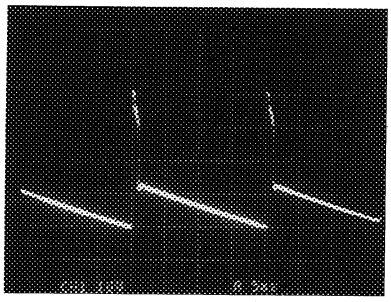
① 100 : 1



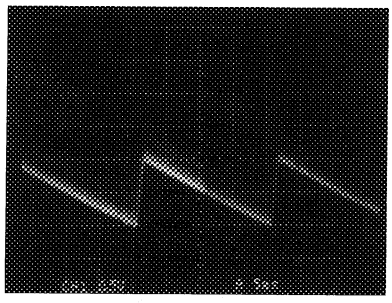
② 780V p-p 100 : 1



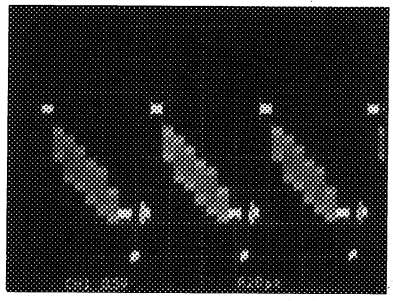
③



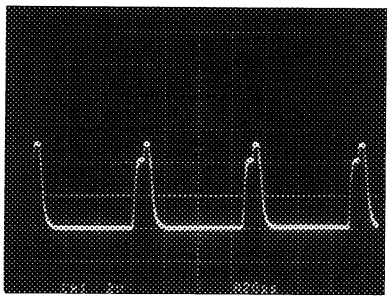
④ 40.1Vp-p



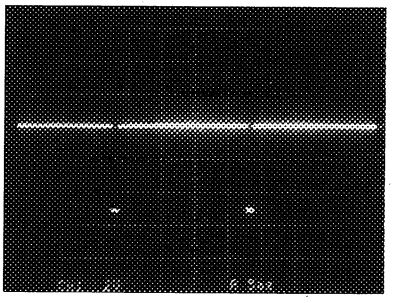
⑤ 1Vp-p



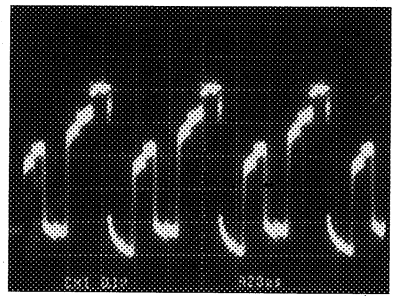
⑥



⑦

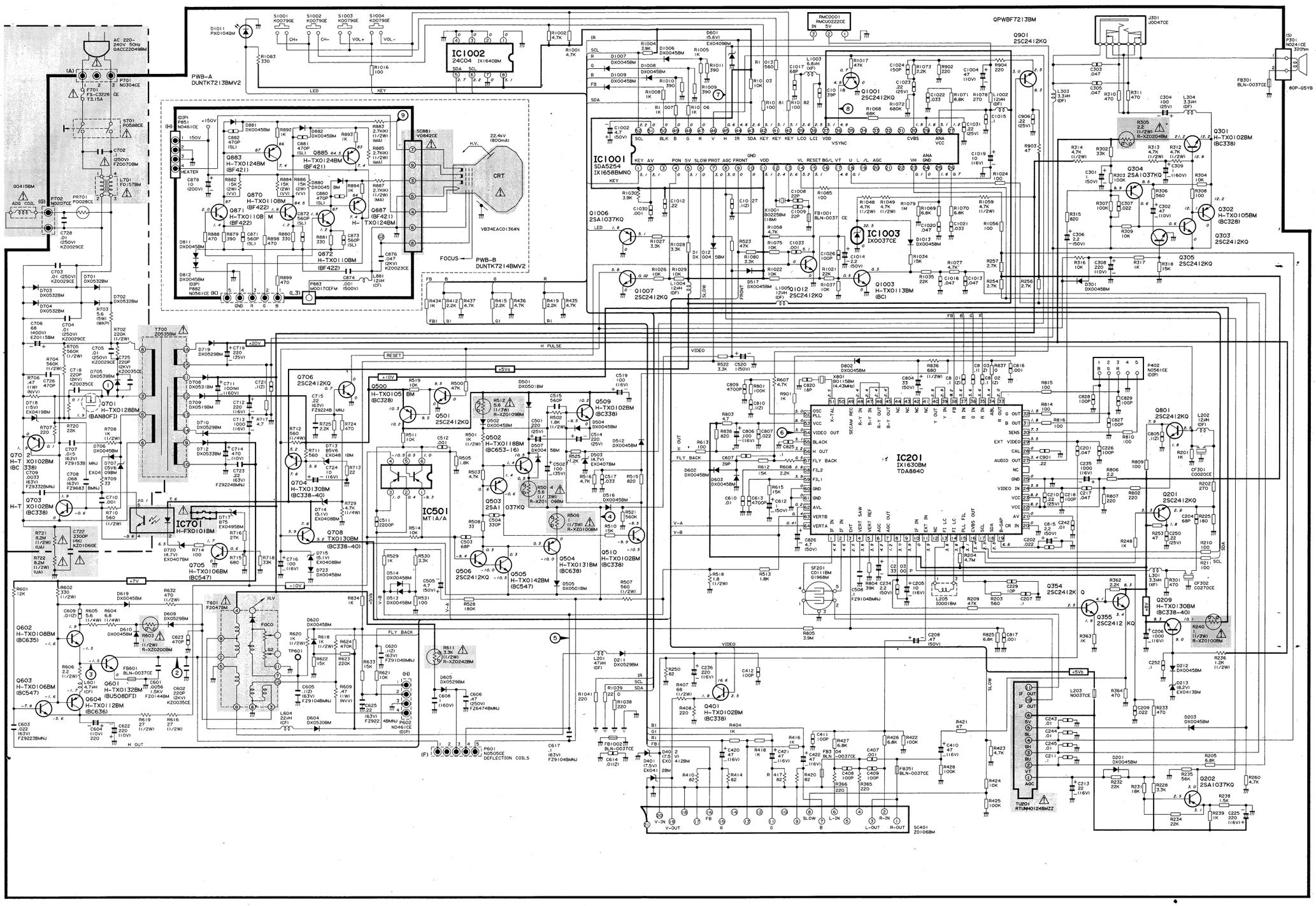


⑧ 5Vp-p



⑨ 50.6Vp-p 100 : 1

MAIN CIRCUIT (37DT-25S)


PWB-A DUNTK7213BMV2
PWB-B DUNTK7214BMV2
IC1002 24C04 IX1640BM
IC1001 SDA5254 IX1658BMN0
IC1003 IX0037CE
IC201 IX1630BM TDA8840
IC701 H-FX0101BM
IC501 MT1A/A
CRT
FOCUS
H.V.
22.4kV (800mA)
VB34EAC01364N
QPWBF7213BM
RMC0001 RMCU0222CE
J301 J0047CE
P701 N0304CE
P702 N0207CE
P701 FS-C3226 CE T3.15A
S701 P0586CE
L701 F0157BM
90415BM
AC 220~240V 50Hz DACCZ2049BM
P851 N0461CE
P682 N0561CE (K)
P883 M0017CEFM
S1001 K0079GE
S1002 K0079GE
S1003 K0079GE
S1004 K0079GE
P402 N0561CE (DIP)
P301 N0241CE 320mm
FB301 BLN-0037CE
80P-65YB
T700 Z0535BM
T601 F2047BM
XO1002BM (BC338)
H-TX0128BM (BAN80FI)
H-TX0118BM (BC653-16)
H-TX0130BM (BC338-40)
H-TX0108BM (BC635)
H-TX0106BM (BC547)
H-TX0112BM (BC636)
H-TX0132BM (BU508DFI)
H-TX0105BM (BC328)
H-TX0102BM (BC338)
H-TX0131BM (BC638)
H-TX0142BM (BC547)
H-TX0113BM (BC)
H-TX0105BM (BC328)
H-TX0102BM (BC338)
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2SA1037KQ
2SC2412 KQ
2SA1037KQ
2SC2412K Q
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Q0871 H-TX0110BM (BF422)
Q0872 H-TX0110BM (BF422)
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Q0903 H-TX0102BM (BC338)
Q0904 H-TX0131BM (BC638)
Q0905 H-TX0142BM (BC547)
Q0906 H-TX0102BM (BC338)
Q0907 H-TX0130BM (BC338-40)
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Q0909 H-TX0108BM (BC635)
Q0910 H-TX0112BM (BC636)
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Q0920 H-TX0112BM (BC636)
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Q0930 H-TX0112BM (BC636)
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Q0950 H-TX0112BM (BC636)
Q0951 H-TX0132BM (BU508DFI)
Q0952 H-TX0105BM (BC328)
Q0953 H-TX0102BM (BC338)
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Q0955 H-TX0142BM (BC547)
Q0956 H-TX0102BM (BC338)
Q0957 H-TX0130BM (BC338-40)
Q0958 H-TX0106BM (BC547)
Q0959 H-TX0108BM (BC635)
Q0960 H-TX0112BM (BC636)
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Q1004 H-TX0102BM (BC338)
Q1005 H-TX0131BM (BC638)
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Q1014 H-TX0112BM (BC636)
Q1015 H-TX0132BM (BU508DFI)
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Q1024 H-TX0112BM (BC636)
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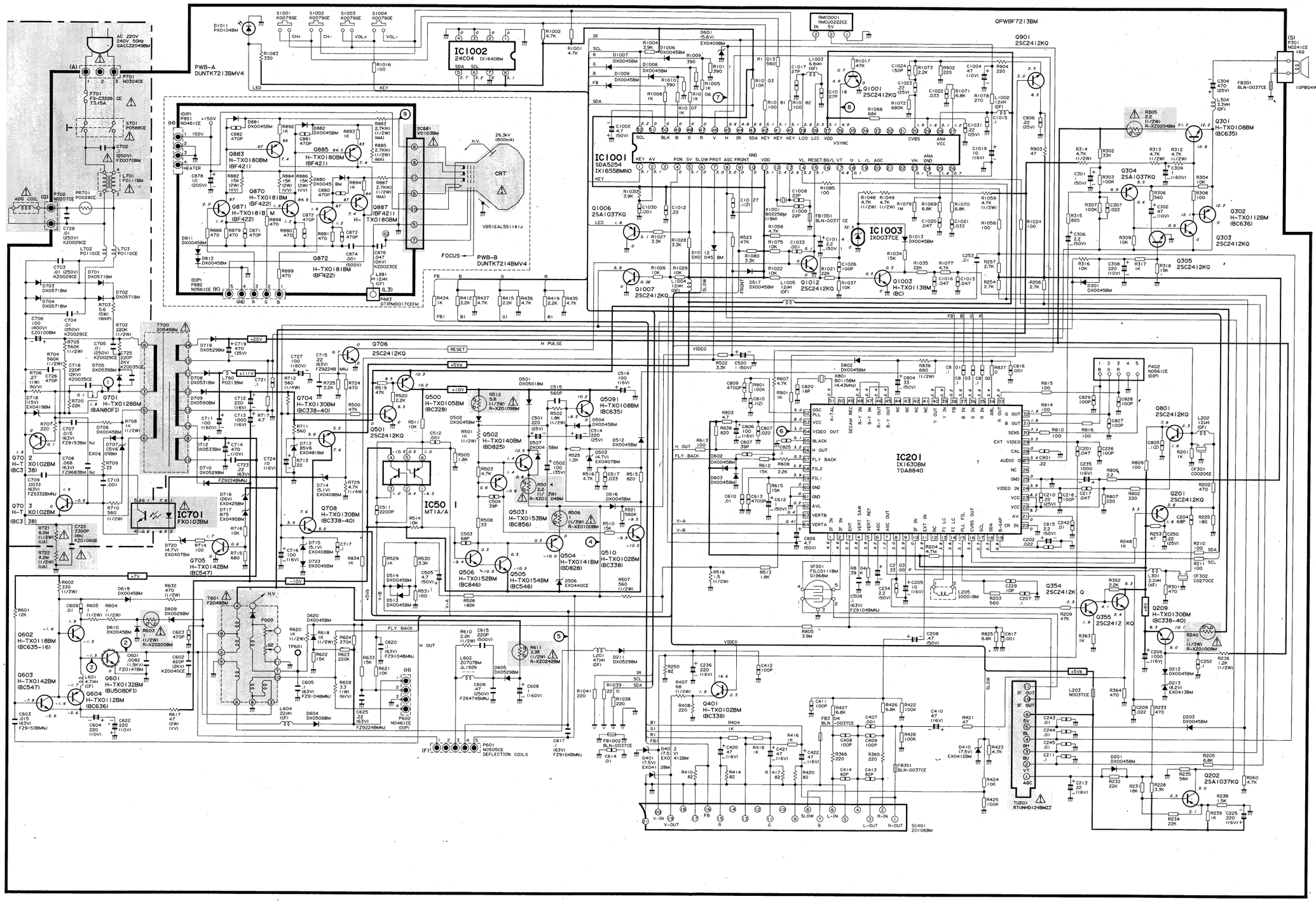
Q1037 H-TX0102BM (BC338)
Q1038 H-TX0131BM (BC638)
Q1039 H-TX0142BM (BC547)
Q1040 H-TX0102BM (BC338)
Q1041 H-TX0130BM (BC338-40)
Q1042 H-TX0106BM (BC547)

37DT-25S
54DT-25S

MAIN CIRCUIT (54DT-25S)


PWB-A
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PWB-B
DUNTK7214BMV4
QPWBF7213BM
IC1001
SDA5254
IX1655BMNO
IC1002
24C04 IX1640BM
IC1003
IX0037CE
IC201
IX1630BM
TDA8840
IC701
FX0103BM
IC50
MT1A/A
CRT
FOCUS
H PULSE
VIDEO
H OUT
FLY-BACK
RESET
+20V
+11V
+10V
+5V
+7V
-10V
+45V
+5Vb
Q706
2SC2412KQ
Q701
H-TX0128BM
(BA80F1)
Q704
H-TX0130BM
(BC338-40)
Q708
H-TX0130BM
(BC338-40)
Q705
H-TX0142BM
(BC547)
Q707
2SC2412KQ
Q500
H-TX0105BM
(BC328)
Q501
2SC2412KQ
Q502
H-TX0140BM
(BD825)
Q5091
H-TX0108BM
(BC635)
Q5031
H-TX0153BM
(BC856)
Q504
H-TX0141BM
(BD828)
Q506
H-TX0152BM
(BC846)
Q505
H-TX0154BM
(BC546)
Q510
H-TX0102BM
(BC338)
Q1001
2SC2412KQ
Q1006
2SA1037KQ
Q1007
2SC2412KQ
Q1003
H-TX0113BM
(BC)
Q1012
2SC2412KQ
Q9001
2SC2412KQ
Q301
H-TX0108BM
(BC635)
Q304
2SA1037KQ
Q302
H-TX0112BM
(BC636)
Q303
2SC2412KQ
Q305
2SC2412KQ
Q883
H-TX0180BM
(BF421)
Q885
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Q887
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(BF421)
Q871
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(BF422)
Q870
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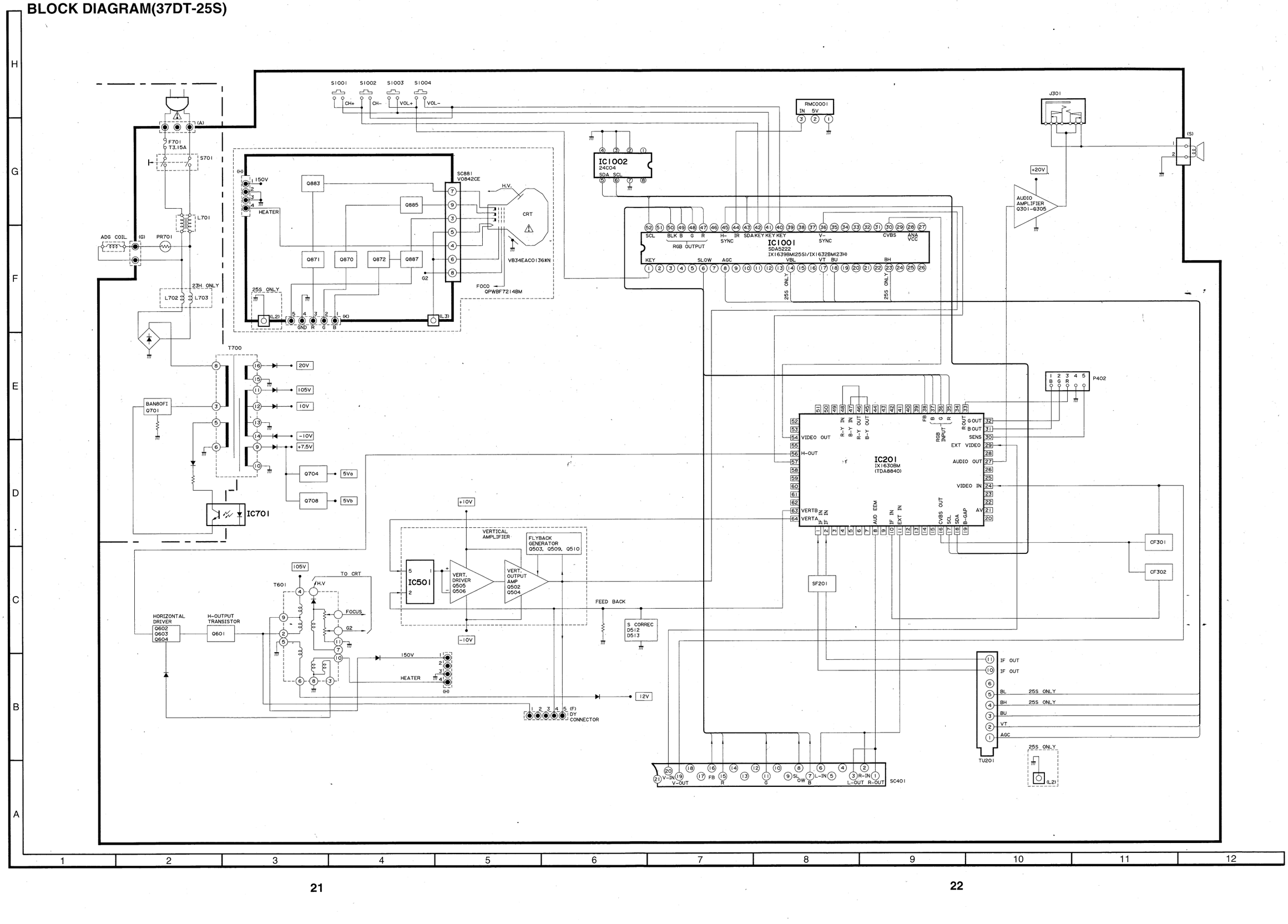
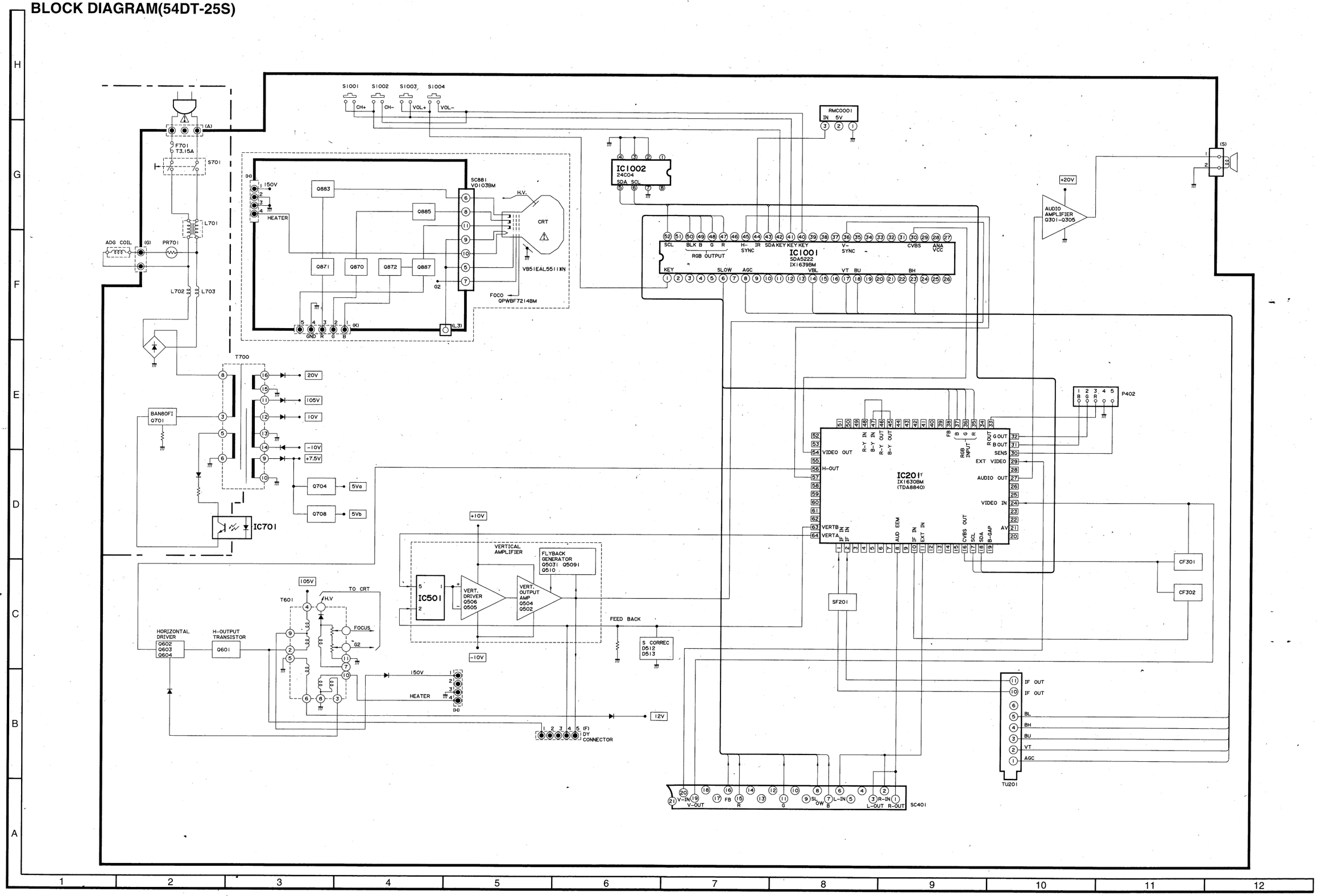
(BF422)
Q872
H-TX0181BM
(BF422)
Q602
H-TX0118BM
(BC635-16)
Q603
H-TX0142BM
(BC547)
Q601
H-TX0132BM
(BU508DF1)
Q604
H-TX0112BM
(BC636)
Q401
H-TX0102BM
(BC338)
Q801
2SC2412KQ
Q201
2SC2412KQ
Q209
H-TX0130BM
(BC338-40)
Q355
2SC2412 KQ
Q354
2SC2412K Q
Q202
2SA1037KQ
TU201
RTUNHD124BMZZ
SC401
Z0106BM
P601
N0505CE
DEFLECTION COILS
P602
N0461CE
P701
N0304CE
P9701
P0028CE
P9702
P0028CE
P801
NO461CE
P851
NO461CE
P882
N0561CE (K)
P402
N0561CE
(DIP)
P301
NO241CE
16Ω
10PB04WA
T700
20545BM
T601
FZ048BM
L3)
0T1PM0017CEFM
RMC0001
RMC0222CE
IN 5V
S1001 K0079GE
S1002 K0079GE
S1003 K0079GE
S1004 K0079GE
CH+
CH-
VOL+
VOL-
KEY
LED
IR
SDA
SCL
H.V.
26.3V
(600mA)
VB51EAL551I01J
VSYNC
CVBS
ANA VCC
ANA GND
FB
B
G
R
BLK
FRONT
SLOW
SCART
AC 220V
240V 50Hz
QACCZ2049BM
ADS COIL
HEATER
FBT
FZ9224BMNJ
FZ9248BMNJ
FZ9104BMNJ
FZ9153BMNJ
FZ9683BMNJ
FZ9338BMNJ
FZ0147BM
FZ9104BMNJ
FZ9104BMNJ
FZ9104BMNJ

BLOCK DIAGRAM(37DT-25S)



BLOCK DIAGRAM(54DT-25S)



PARTS LIST

REPLACEMENT PARTS

Replacement parts which have special safety characteristics are identified in this manual. Electrical components having such features are identified by ⚠ in the Replacement Parts list.
The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended is not permitted. Replacement parts not shown in this service manual may create shock fire, or other hazards.

HOW TO ORDER REPLACEMENT PARTS

To have your order completed promptly and correctly please supply the following information.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION
5. CODE
6. QUANTITY

CODE EX: EUROPEAN MARKET
CODE SP: SPANISH MARKET
★ MARK: SPARE PARTS DELIVERY SECTION

REF. NO.	PARTS NO.	★	DESCRIPTION	EX	SP
PICTURE TUBE					
⚠	VB34EAC0136*N	S	C.R.T. 14"	CD	BS
⚠	VB51JFC61091E	S	C.R.T. 21"	CG	BR
⚠	RCILG0415BMZZ	S	Degaussing Coil 14"	AM	AF
⚠	CCILG0311WEV0	S	Degaussing Coil 21"	AU	AV
PRINTED WIRING BOARDS (Not Replacement item)					
PWB-A	DUNTK7213CJV2	S	Mother Unit 37DT25S	—	—
PWB-A	DUNTK7213CJV4	S	Mother Unit 54DT25S	—	—
PWB-B	DUNTK7214CJV2	S	Socket Unit 37DT25S	—	—
PWB-B	DUNTK7214CJV4	S	Socket Unit 54DT25S	—	—
PWB A+B	DSETU7213BMV2	S	Complet Chassis 37DT25S	—	—
PWB A+B	DSETU7213BMV4	S	Complet Chassis 54DT25S	—	—
MOTHER UNIT					
TUNER					
TU 0201	RTUNH0124BMZZ	S	Tuner	BA	AU
INTEGRATED CIRCUITS					
IC 0201	RH-IX1630BMZZ	S	TDA8840	AZ	AS
IC 0501	VHSMT1A/A//-1	S	MT1A / A	AB	AA
⚠ IC 0701	RH-FX0103BMZZ	S	MOC8105SR2V	AD	AC
IC 1001	RH-IX1658BMN0	S	µP 37DT25S	BD	AX
IC 1001	RH-IX1655BMN0	S	µP 54DT25S	BD	AX
IC 1002	RH-IX1640BMZZ	S	NVM	AL	AF
IC 1003	RH-IX0037CEZZ	S	UPC574J 33V	AD	AF
TRANSISTORS					
Q 0201	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0202	VS2SA1037KQ-1	S	BC807	AA	AA
Q 0209	RH-TX0130BMZZ	S	BC338-40	AB	AA
Q 0301	RH-TX0102BMZZ	S	BC338	AB	AA
Q 0302	RH-TX0105BMZZ	S	BC328	AB	AA
Q 0303	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0304	VS2SA1037KQ-1	S	BC807	AA	AA
Q 0305	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0354	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0355	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0401	RH-TX0102BMZZ	S	BC338	AB	AA
Q 0500	RH-TX0105BMZZ	S	BC328	AB	AA
Q 0501	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0502	RH-TX0118BMZZ	S	BC635-16 37DT25S	AC	AC
Q 0502	RH-TX0140BMZZ	S	BD825-16 54DT25S	AC	AF
Q 0503	VS2SA1037KQ-1	S	BC807 37DT25S	AA	AA
Q 0503	RH-TX0153BMZZ	S	BC856BLT1 54DT25S	AB	AA
Q 0504	RH-TX0131BMZZ	S	BC638 37DT25S	AC	AB
Q 0504	RH-TX0141BMZZ	S	BD828 54DT25S	AC	AF
Q 0505	RH-TX0142BMZZ	S	BC547-B 37DT25S	AB	AA
Q 0505	RH-TX0154BMZZ	S	BC546 54DT25S	AA	AA
Q 0506	VS2SC2412KQ-1	S	2SC2412 37DT25S	AA	AA
Q 0506	RH-TX0152BMZZ	S	BC846BLT1 54DT25S	AA	AA
Q 0509	RH-TX0102BMZZ	S	BC338	AB	AA
Q 0510	RH-TX0102BMZZ	S	BC338	AB	AA
Q 0601	RH-TX0132BMZZ	S	BU508DFI	AM	AF
Q 0602	RH-TX0180BMZZ	S	BC635 37DT25S	AB	AA
Q 0602	RH-TX0118BMZZ	S	BC635-16 ß> 100 54DT25S	AC	AC
Q 0603	RH-TX0142BMZZ	S	BC547-B	AB	AA
Q 0604	RH-TX0112BMZZ	S	BC636	AB	AA
Q 0701	RH-TX0128BMZZ	S	STP3NA80FI	AM	AF
Q 0702	RH-TX0102BMZZ	S	BC338	AB	AA
Q 0703	RH-TX0102BMZZ	S	BC338	AB	AA
Q 0704	RH-TX0130BMZZ	S	BC338-40	AB	AA
Q 0705	RH-TX0142BMZZ	S	BC547-B	AB	AA
Q 0706	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0708	RH-TX0130BMZZ	S	BC338-40	AB	AA
Q 0801	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0901	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 1001	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 1003	RH-TX0113BMZZ	S	BF840	AC	AA
Q 1006	VS2SA1037KQ-1	S	BC807	AA	AA
Q 1007	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 1012	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 3011	RH-TX0108BMZZ	S	BC635	AC	AA
Q 3021	RH-TX0112BMZZ	S	BC636	AB	AA
Q 5031	RH-TX0153BMZZ	S	BC856	AB	AA
Q 5091	RH-TX0108BMZZ	S	BC635	AC	AA
DIODES					
D 0201	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0203	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0211	RH-DX0529BMZZ	S	1N4935	AB	AB
D 0212	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0213	RH-EX0413BMZZ	S	Zener BZX79C8V2	AB	AB
D 0301	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0401	RH-EX0412BMZZ	S	Zener BZX79C7V5	AB	AA
D 0402	RH-EX0412BMZZ	S	Zener BZX79C7V5	AB	AA
D 0410	RH-EX0412BMZZ	S	Zener BZX79C7V5	AB	AA
D 0501	RH-DX0501BMZZ	S	1N4004	AA	AA
D 0502	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0503	RH-EX0409BMZZ	S	Zener BZX79C5V6	AA	AA
D 0504	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0505	RH-DX0501BMZZ	S	1N4004	AA	AA
D 0506	RH-EX0440CEZZ	S	Zener 2.7V	AA	AA
D 0507	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0512	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0513	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0514	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0516	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0517	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0601	RH-EX0409BMZZ	S	Zener BZX79C5V6	AA	AA
D 0602	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0603	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0604	RH-DX0506BMZZ	S	1N4936	AB	AB
D 0605	RH-DX0529BMZZ	S	1N4935	AB	AB
D 0609	RH-DX0529BMZZ	S	1N4935	AB	AB
D 0610	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0619	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0620	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0701	RH-DX0571BMZZ	S	1N4005	AA	AA

REF. NO.	PARTS NO.	★	DESCRIPTION	EX SP
D 0702	RH-DX0571BMZZ	S	1N4005	AA AA
D 0703	RH-DX0571BMZZ	S	1N4005	AA AA
D 0704	RH-DX0571BMZZ	S	1N4005	AA AA
D 0705	RH-DX0539BMZZ	S	BYT52M	AC AA
D 0706	RH-DX0045BMZZ	S	1N4148	AA AA
D 0707	RH-EX0409BMZZ	S	Zener BZX79C5V6	AA AA
D 0708	RH-DX0561BMZZ	S	RGP15J 54DT25S	AD AA
D 0708	RH-DX0531BMZZ	S	1N4937 37DT25S	AB AD
D 0709	RH-DX0590BMZZ	S	MBR1100RL	AE AD
D 0710	RH-DX0529BMZZ	S	1N4935	AB AB
D 0712	RH-DX0533BMZZ	S	1N5819	AD AB
D 0713	RH-EX0481BMZZ	S	Zener BZX79 B5V6	AB AA
D 0714	RH-EX0408BMZZ	S	Zener BZX79C5V1	AB AB
D 0715	RH-EX0408BMZZ	S	Zener BZX79C5V1	AB AB
D 0716	RH-EX0425BMZZ	S	Zener BZX79C27V	AA AA
D 0717	RH-EX0495BMZZ	S	Zener BZX79 75V	AB AA
D 0718	RH-EX0419BMZZ	S	Zener BZX79C15V 0,4W	AB AA
D 0719	RH-DX0529BMZZ	S	1N4935	AB AB
D 0720	RH-EX0407BMZZ	S	Zener BZX79C4V7	AA AA
D 0723	RH-DX0045BMZZ	S	1N4148	AA AA
D 0802	RH-DX0045BMZZ	S	1N4148	AA AA
D 1006	RH-DX0045BMZZ	S	1N4148	AA AA
D 1007	RH-DX0045BMZZ	S	1N4148	AA AA
D 1008	RH-DX0045BMZZ	S	1N4148	AA AA
D 1009	RH-DX0045BMZZ	S	1N4148	AA AA
D 1011	RH-PX0104BMZZ	S	LED	AC AB
D 1012	RH-DX0045BMZZ	S	1N4148	AA AA
D 1013	RH-DX0045BMZZ	S	1N4148	AA AA
	PACKADGED CIRCUITS			
⚠ PR 0701	RMPTP0028CEZZ	S	P.T.C.	AG AC
X 0801	RCRSB0115BMZZ	S	Crystal 4.43 MHz	AG AD
X 1001	RCRSB0225BMZZ	S	Crystal 18.0 MHz	AM AG
	COILS			
L 0201	VP-DF470K0000	S	47µH	AB AB
L 0202	VP-DF120K0000	S	12µH	AB AB
L 0203	RBLN-0037CEZZ	S	Ferrite Bead	AB AB
L 0205	RCILI0001BMZZ	S	I.F.Coil	AE AC
L 0301	VP-XF3R3K0000	S	3.3µH	AA AA
L 0303	VP-DF3R3K0000	S	3.3µH	AB AB
L 0304	VP-DF3R3K0000	S	3.3µH	AB AB
L 0601	VP-CF4R7K0000	S	4.7µH	AB AA
L 0602	RCILZ0707BMZZ	S	Lineality Coil	AH AE
L 0604	VP-CF220K0000	S	22µH	AA AA
⚠ L 0701	RCILF0157BMZZ	S	Main Filter 37DT25S	AL AF
⚠ L 0701	RCILF0111BMZZ	S	Main Filter 54DT25S	AL AE
L 0702	RCILP0110CEZZ	S	3.3µH	AD AD
L 0703	RCILP0110CEZZ	S	3.3µH	AD AD
L 0790	RCILP0213BMZZ	S	13.5µH	AF AA
L 1002	VP-DF120K0000	S	12µH	AB AB
L 1003	VP-XF6R8K0000	S	6.8µH	AB AA
L 1004	VP-DF120K0000	S	12µH	AB AB
L 1005	VP-DF120K0000	S	12µH	AB AB
	CERAMIC FILTERS			
CF 0301	RFILC0020CEZZ	S	Filter 5.5 MHz (T5.5B)	AE AE
CF 0302	RFILC0270CEZZ	S	Filter	AE AC
SF 0201	RFILC0111BMZZ	S	Filter G1968M	AM AF
	TRANSFORMERS			
⚠ T 0601	RTRNF2047BMZZ	S	F.B.T. 37DT25S	AY AR
⚠ T 0601	RTRNF2048BMZZ	S	F.B.T. 54DT25S	BB AU
⚠ T 0700	RTRNZ0535BMZZ	S	Chopper 37DT25S	AR AK
⚠ T 0700	RTRNZ0545BMZZ	S	Chopper 54DT25S	AM AV

REF. NO.	PARTS NO.	★	DESCRIPTION	EX SP
	CAPACITORS			
C 0201	VCKYTV1HF473Z	S	0.047 50V Ceramic	AA AA
C 0202	VCKYTV1HB223K	S	0.022 50V Ceramic	AA AA
C 0203	VCKYTV1HB332K	S	3300p 50V Ceramic	AA AA
C 0204	VCCCTV1HH680J	S	68p 50V Ceramic	AA AA
C 0205	VCEAGA1CW106M	S	10 16V Electrolytic	AA AA
C 0206	VCEAGA1CW227M	R	220 16V Electrolytic 37DT25S	AC AC
C 0206	VCEAGA1CW108M	S	1000 16V Electrolytic 54DT25S	AE AD
C 0207	VCKYTV1HF104Z	S	0.1 50V Ceramic	AA AA
C 0208	VCEAGA1HW474M	S	0.47 50V Electrolytic	AA AA
C 0209	VCKYTV1HB223K	S	0.022 50V Ceramic	AA AA
C 0210	VCKYTV1EF224Z	S	0.22 25V Ceramic	AA AA
C 0211	VCKYTV1HF104Z	S	0.1 50V Ceramic	AA AA
C 0213	VCEAGA1CW226M	S	22 16V Electrolytic	AA AA
C 0217	VCKYTV1HF473Z	S	0.047 50V Ceramic	AA AA
C 0218	VCCCTV1HH101J	S	100p 50V Ceramic	AA AA
C 0225	VCEAGA1CW227M	S	220 16V Electrolytic	AC AC
C 0226	VCCCTV1HH101J	S	100p 50V Ceramic	AA AA
C 0229	VCCCTV1HH100D	S	10p 50V Ceramic	AA AA
C 0234	VCEAGA1HW225M	S	2.2 50V Electrolytic	AB AA
C 0235	VCEAGA1CW108M	S	1000 16V Electrolytic	AE AD
C 0236	VCEAGA1CW227M	S	220 16V Electrolytic	AC AC
C 0242	VCKYTV1HF103Z	S	0.01 50V Ceramic	AA AA
C 0243	VCKYTV1HF103Z	S	0.01 50V Ceramic	AA AA
C 0244	VCKYTV1HF103Z	S	0.01 50V Ceramic	AA AA
C 0245	VCKYTV1HF103Z	S	0.01 50V Ceramic	AA AA
C 0250	VCKYTV1EF224Z	S	0.22 25V Ceramic	AA AA
C 0252	VCKYTV1HF104Z	S	0.1 50V Ceramic	AA AA
C 0253	VCKYD41CY103N	S	0.01 16V Ceramic 37DT25S	AA AA
C 0253	VCKYTV1HF103Z	S	0.01 50V Ceramic 54DT25S	AA AA
C 0301	VCEAGA1HW105M	S	1 50V Electrolytic	AA AB
C 0302	VCEAGA1AW476M	S	47 10V Electrolytic	AA AA
C 0303	VCKYTV1HF473Z	S	0.047 50V Ceramic	AA AA
C 0304	VCEAGA1EW107M	S	100 25V Electrolytic 37DT25S	AB AA
C 0304	VCEAGA1EW477M	S	470 25V Electrolytic 54DT25S	AD AC
C 0305	VCKYTV1HF473Z	S	0.047 50V Ceramic	AA AA
C 0306	VCEAGA1HW225M	S	2.2 50V Electrolytic	AB AA
C 0307	VCKYTV1HB223K	S	0.022 50V Ceramic	AA AA
C 0308	VCEAGA1AW227M	S	220 10V Electrolytic	AB AA
C 0309	VCEAGA2CW105M	S	1 160V Electrolytic	AB AA
C 0351	VCEAGA1CW476M	S	47 16V Electrolytic	AB AB
C 0407	VCKYTV1HB102K	S	1000p 50V Ceramic	AA AA
C 0408	VCCCTV1HH101J	S	100p 50V Ceramic	AA AA
C 0409	VCCCTV1HH101J	S	100p 50V Ceramic	AA AA
C 0410	VCEAGA1CW476M	S	47 16V Electrolytic	AB AB
C 0411	VCCCTV1HH101J	S	100p 50V Ceramic	AA AA
C 0412	VCCCTV1HH101J	S	100p 50V Ceramic	AA AA
C 0413	VCCCTV1HH820J	S	82p 50V Ceramic	AA AA
C 0414	VCCCTV1HH820J	S	82p 50V Ceramic	AA AA
C 0420	VCEAGA1CW476M	S	47 16V Electrolytic	AB AB
C 0421	VCEAGA1CW476M	S	47 16V Electrolytic	AB AB
C 0422	VCEAGA1CW476M	S	47 16V Electrolytic	AB AB
C 0501	VCEAGA1EW227M	S	220 25V Electrolytic	AA AA
C 0502	VCEAGA1VW107M	S	100 35V Electrolytic	AC AA
C 0503	VCCCTV1HH680J	S	68p 50V Ceramic	AA AA
C 0504	VCCCTV1HH680J	S	68p 50V Ceramic	AA AA
C 0505	VCEAGA1HW475M	S	4.7 50V Electrolytic	AC AC
C 0508	RC-FZ9104BMNJ	J	0.1 63V Mylar	AB AA
C 0511	VCKYTV1HB222K	S	2200p 50V Ceramic	AA AA
C 0512	VCKYTV1HB102K	S	1000p 50V Ceramic	AA AA
C 0514	VCEAGA1EW227M	S	220 25V Electrolytic	AA AA
C 0515	VCKYPA1HB561K	S	560p 50V Ceramic	AA AA
C 0517	VCKYTV1HB333K	S	0.033 50V Ceramic	AA AA
C 0518	VCCSTV1HL680J	S	68P 50V Ceramic	AA AA
C 0519	VCEAGA1CW107M	S	100 16V Electrolytic	AB AA
C 0520	VCEAGA1HW105M	S	1 50V Electrolytic	AA AB
C 0521	VCEAGA1CW106M	S	10 16V Electrolytic	AA AA
C 0601	RC-FZ0144BMZZ	S	5600p 1.5KV Mylar 37DT25S	AE AE
C 0601	RC-FZ0147BMZZ	S	8200p 1.5KV Mylar 54DT25S	AE AC

REF. NO.	PARTS NO.	★	DESCRIPTION	EX SP
C 0602	RC-KZ0035CEZZ	S	220p 2KV Ceramic 37DT25S	AC AA
C 0602	RC-KZ0040CEZZ	S	820p 2KV Ceramic 54DT25S	AD AD
C 0603	RC-FZ9223BMNJ	J	0.022 63V Mylar 37DT25S	AB AA
C 0603	RC-FZ9153BMNJ	J	0.015 63V Mylar 54DT25S	AB AA
C 0604	VCEAGA1AW227M	S	220 10V Electrolytic	AB AA
C 0605	RC-FZ9104BMNJ	J	0.1 63V Mylar	AB AA
C 0606	RC-FZ6474BMNJ	J	0.47 250V Mylar	AE AB
C 0607	VCCCPA1HH390J	S	39p 50V Ceramic 37DT25S	AA AA
C 0607	VCCCTV1HH390J	S	39p 50V Ceramic 54DT25S	AA AA
C 0608	VCEAGA2CW105M	S	1 160V Electrolytic	AB AA
C 0609	VCKYTV1HF103Z	S	0.01 50V Ceramic	AA AA
C 0610	VCKYTV1HF103Z	S	0.01 50V Ceramic	AA AA
C 0612	VCEAGA1HW105M	S	1 50V Electrolytic	AA AB
C 0613	VCKYTV1HB472K	S	4700p 50V Ceramic	AA AA
C 0614	VCKYTV1HF103Z	S	0.01 50V Ceramic	AA AA
C 0615	VCKYPA2HB221K	S	220p 500V Ceramic	AA AA
C 0617	RC-FZ9104BMNJ	J	0.1 63V Mylar	AB AA
C 0620	RC-FZ9104BMNJ	J	0.1 63V Mylar	AB AA
C 0622	VCEAGA1AW227M	S	220 10V Electrolytic	AB AA
C 0623	VCCSTV1HL471J	S	470p 50V Ceramic	AA AA
C 0625	RC-FZ9224BMNJ	J	0.22 63V Mylar	AC AA
⚠ C 0702	RC-FZ0070BMZZ	S	0.1 250V Mylar	AD AD
C 0703	RC-KZ0029CEZZ	S	0.01 250V Ceramic	AC AC
C 0704	RC-KZ0029CEZZ	S	0.01 250V Ceramic	AC AC
C 0705	RC-KZ0029CEZZ	S	0.01 250V Ceramic	AC AC
C 0706	RC-EZ0115BMZZ	S	68 400V Electrolytic 37DT25S	AM AF
C 0706	RC-EZ0100BMZZ	S	100 400V Electrolytic 54DT25S	AM AF
C 0707	RC-FZ9153BMNJ	J	0.015 63V Mylar	AB AA
C 0708	RC-FZ9683BMNJ	J	0.068 63V Mylar	AB AA
C 0709	RC-FZ9332BMNJ	J	3300p 63V Mylar	AA AA
C 0710	VCKYPA1HB102K	S	1000p 50V Ceramic	AA AA
C 0711	VCEAGH2CW107M	S	100 160V Electrolytic	AF AC
C 0712	VCEAGA1CW227M	S	220 16V Electrolytic	AC AC
C 0713	VCEAGA1CW108M	S	1000 16V Electrolytic	AE AD
C 0714	VCEAGA1AW477M	S	470 10V Electrolytic	AB AA
C 0715	RC-FZ9224BMNJ	J	0.22 63V Mylar	AC AA
C 0716	VCEAGA1CW107M	S	100 16V Electrolytic	AB AA
C 0717	VCKYTV1HF104Z	S	0.1 50V Ceramic	AA AA
C 0718	RC-KZ0035CEZZ	S	220p 2KV Ceramic	AC AA
C 0719	VCEAGA1VW227M	S	220 35V Electrolytic 37DT25S	AB AA
C 0719	VCEAGA1VW477M	S	470 35V Electrolytic 54DT25S	AD AA
C 0721	VCKYTV1HF104Z	S	0.1 50V Ceramic	AA AA
⚠ C 0722	RC-KZ0106GEZZ	S	3300p 4KV Ceramic	AC AB
C 0723	RC-FZ9224BMNJ	J	0.22 63V Mylar	AC AA
C 0724	VCEAGA1CW106M	S	10 16V Electrolytic	AA AA
C 0725	RC-KZ0035CEZZ	S	220p 2KV Ceramic	AC AA
C 0726	VCKYPA1HB471K	S	470p 50V Ceramic	AA AA
C 0727	VCEAGH2CW107M	S	100 160V Electrolytic	AF AC
C 0728	RC-KZ0029CEZZ	S	0.01 250V Ceramic	AC AC
C 0801	VCKYTV1HF104Z	S	0.1 50V Ceramic	AA AA
C 0802	VCKYTV1HF104Z	S	0.1 50V Ceramic	AA AA
C 0803	VCKYTV1HF104Z	S	0.1 50V Ceramic	AA AA
C 0804	VCEAGA1HW336M	S	33 50V Electrolytic	AB AA
C 0805	VCKYTV1HF104Z	S	0.1 50V Ceramic	AA AA
C 0806	VCEAGA1CW107M	S	100 16V Electrolytic	AB AA
C 0807	VCKYTV1HB223K	S	0.022 50V Ceramic	AA AA
C 0809	VCKYTV1HB472K	S	4700p 50V Ceramic	AA AA
C 0810	VCKYTV1HF104Z	S	0.1 50V Ceramic	AA AA
C 0815	VCEAGA1HW225M	S	2.2 50V Electrolytic	AB AA
C 0816	VCKYTV1HB102K	S	1000p 50V Ceramic	AA AA
C 0817	VCKYTV1HB102K	S	1000p 50V Ceramic	AA AA
C 0820	VCCCTV1HH180J	S	18p 50V Ceramic	AA AA
C 0825	VCKYTV1HF104Z	S	0.1 50V Ceramic	AA AA
C 0826	VCEAGA1HW475M	S	4.7 50V Electrolytic	AC AC
C 0827	VCCCTV1HH101J	S	100p 50V Ceramic	AA AA
C 0828	VCCCTV1HH101J	S	100p 50V Ceramic	AA AA
C 0829	VCCCTV1HH101J	S	100p 50V Ceramic	AA AA
C 0901	VCKYTV1HF224Z	S	0.22 50V Ceramic	AA AA
C 0906	VCKYTV1EF224Z	S	0.22 25V Ceramic	AA AA
C 1002	VCEAGA1HW475M	S	4.7 0V Electrolytic	AC AC
C 1004	VCEAGA1AW476M	S	47 10V Electrolytic	AA AA
C 1008	VCCCTV1HH220J	S	22p 50V Ceramic	AA AA
C 1009	VCCCTV1HH220J	S	22p 50V Ceramic	AA AA
C 1011	VCKYTV1HB102K	S	1000p 50V Ceramic	AA AA
C 1012	VCKYTV1HF224Z	S	0.22 50V Ceramic	AA AA
C 1013	VCKYTV1HB473K	S	0.047 50V Ceramic	AA AA
C 1014	VCEAGA1HW225M	S	2.2 50V Electrolytic	AB AA
C 1015	RC-FZ9104BMNJ	J	0.1 63V Mylar 37DT25S	AB AA
C 1015	VCKYTV1HF104Z	S	0.1 50V Ceramic 54DT25S	AA AA
C 1016	VCKYTV1HF473Z	S	0.047 50V Ceramic	AA AA
C 1017	VCCCTV1HH680J	S	68p 50V Ceramic 37DT25S	AA AA
C 1017	VCCCTV1HH270J	S	27P 50V Ceramic 54DT25S	AA AA
C 1018	VCCCTV1HH390J	S	39p 50V Ceramic 37DT25S	AA AA
C 1018	VCCCTV1HH270J	S	27P 50V Ceramic 54DT25S	AA AA
C 1019	VCEAGA1CW106M	S	10 16V Electrolytic	AA AA
C 1020	VCKYTV1HF473Z	S	0.047 50V Ceramic	AA AA
C 1021	VCKYTV1HB473K	S	0.047 50V Ceramic	AA AA
C 1022	VCKYTV1HB333K	S	0.033 50V Ceramic	AA AA
C 1023	VCKYTV1EF224Z	S	0.22 25V Ceramic	AA AA
C 1024	VCCCTV1HH151J	S	150p 50V Ceramic	AA AA
C 1026	VCCCTV1HH101J	S	100p 50V Ceramic	AA AA
C 1027	VCKYTV1HF104Z	S	0.1 50V Ceramic	AA AA
C 1028	VCKYTV1HB102K	S	1000p 50V Ceramic	AA AA
C 1030	VCKYTV1HB102K	S	1000p 50V Ceramic	AA AA
C 1031	VCKYTV1EF224Z	S	0.22 25V Ceramic	AA AA
C 1033	VCKYTV1HB102K	S	1000p 50V Ceramic	AA AA

RESISTORS

R 0201	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
R 0202	VRS-TV1JD271J	S	270 1/10W Metal Oxide	AA AA
R 0203	VRS-TV1JD561J	S	560 1/10W Metal Oxide	AA AA
R 0204	VRS-TV1JD475J	S	4.7M 1/10W Metal Oxide	AA AA
R 0205	VRS-TV1JD682J	S	6.8K 1/10W Metal Oxide	AA AA
R 0208	VRD-RA2BE473J	S	47K 1/8W Carbon 37DT25S	AA AA
R 0208	VRS-TV1JD473J	S	47K 1/10W Metal Oxide 54DT25S	AA AA
R 0209	VRS-TV1JD473J	S	47K 1/10W Metal Oxide	AA AA
R 0210	VRS-TV1JD101J	S	100 1/10W Metal Oxide	AA AA
R 0211	VRS-TV1JD101J	S	100 1/10W Metal Oxide	AA AA
R 0225	VRS-TV1JD181J	S	180 1/10W Metal Oxide	AA AA
R 0228	VRS-TV1JD332J	S	3.3K 1/10W Metal Oxide	AA AA
R 0231	VRS-TV1JD183J	S	18K 1/10W Metal Oxide	AA AA
R 0232	VRS-TV1JD223J	S	22K 1/10W Metal Oxide	AA AA
R 0233	VRS-TV1JD471J	S	470 1/10W Metal Oxide	AA AA
R 0234	VRS-TV1JD223J	S	22K 1/10W Metal Oxide	AA AA
R 0235	VRS-TV1JD563J	S	56K 1/10W Metal Oxide	AA AA
R 0236	VRD-RA2HD122J	S	1.2K 1/2W Carbon	AA AA
R 0238	VRS-TV1JD152J	S	1.5K 1/10W Metal Oxide	AA AA
R 0239	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
⚠ R 0240	RR-XZ0100BMZZ	S	1 1/3W Fuse Resistor	AB AA
R 0248	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
R 0250	VRD-RA2BE820J	S	82 1/8W Carbon	AA AA
R 0253	VRS-TV1JD470J	S	47 1/10W Metal Oxide	AA AA
R 0254	VRS-TV1JD272J	S	2.7K 1/10W Metal Oxide	AA AA
R 0256	VRS-TV1JD272J	S	2.7K 1/10W Metal Oxide	AA AA
R 0257	VRS-TV1JD272J	S	2.7K 1/10W Metal Oxide	AA AA
R 0260	VRS-TV1JD472J	S	4.7K 1/10W Metal Oxide	AA AA
R 0301	VRS-TV1JD471J	S	470 1/10W Metal Oxide	AA AA
R 0302	VRS-TV1JD333J	S	33K 1/10W Metal Oxide	AA AA
R 0303	VRS-TV1JD104J	S	100K 1/10W Metal Oxide	AA AA
R 0304	VRS-TV1JD103J	S	10K 1/10W Metal Oxide	AA AA
⚠ R 0305	RR-XZ0204BMZZ	S	2.2 1/2W Fuse Resistor	AB AA
R 0306	VRS-TV1JD561J	S	560 1/10W Metal Oxide	AA AA
R 0307	VRS-TV1JD104J	S	100K 1/10W Metal Oxide	AA AA
R 0308	VRS-TV1JD101J	S	100 1/10W Metal Oxide	AA AA
R 0309	VRS-TV1JD103J	S	10K 1/10W Metal Oxide	AA AA
R 0310	VRS-TV1JD471J	S	470 1/10W Metal Oxide	AA AA
R 0311	VRS-TV1JD471J	S	470 1/10W Metal Oxide	AA AA
R 0312	VRD-RA2HD472J	S	4.7K 1/2W Carbon	AA AA
R 0313	VRD-RA2HD472J	S	4.7K 1/2W Carbon	AA AA
R 0314	VRD-RA2HD472J	S	4.7K 1/2W Carbon	AA AA
R 0315	VRS-TV1JD82IJ	S	820 1/10W Metal Oxide	AA AA

REF. NO.	PARTS NO.	★	DESCRIPTION	EX SP
R 0316	VRD-RA2BE103J	S	10K 1/8W Carbon	AA AA
R 0317	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
R 0318	VRS-TV1JD153J	S	15K 1/10W Metal Oxide	AA AA
R 0362	VRS-TV1JD222J	S	2.2K 1/10W Metal Oxide	AA AA
R 0363	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
R 0364	VRS-TV1JD471J	S	470 1/10W Metal Oxide	AA AA
R 0365	VRD-RA2BE221J	S	220 1/8W Carbon	AA AA
R 0366	VRD-RA2BE221J	S	220 1/8W Carbon	AA AA
R 0404	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
R 0407	VRD-RA2HD680J	S	68 1/2W Carbon	AA AA
R 0408	VRD-RA2BE221J	S	220 1/8W Carbon	AA AA
R 0410	VRD-RA2BE820J	S	82 1/8W Carbon	AA AA
R 0412	VRS-TV1JD222J	S	2.2K 1/10W Metal Oxide	AA AA
R 0414	VRD-RA2BE820J	S	82 1/8W Carbon	AA AA
R 0415	VRS-TV1JD222J	S	2.2K 1/10W Metal Oxide	AA AA
R 0416	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
R 0417	VRD-RA2BE820J	S	82 1/8W Carbon	AA AA
R 0418	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
R 0419	VRS-TV1JD222J	S	2.2K 1/10W Metal Oxide	AA AA
R 0420	VRD-RA2BE820J	S	82 1/8W Carbon	AA AA
R 0421	VRS-TV1JD470J	S	47 1/10W Metal Oxide	AA AA
R 0422	VRS-TV1JD104J	S	100K 1/10W Metal Oxide	AA AA
R 0423	VRS-TV1JD472J	S	4.7K 1/10W Metal Oxide	AA AA
R 0424	VRS-TV1JD103J	S	10K 1/10W Metal Oxide	AA AA
R 0425	VRS-TV1JD104J	S	100K 1/10W Metal Oxide	AA AA
R 0426	VRS-TV1JD682J	S	6.8K 1/10W Metal Oxide	AA AA
R 0427	VRS-TV1JD682J	S	6.8K 1/10W Metal Oxide	AA AA
R 0428	VRS-TV1JD104J	S	100K 1/10W Metal Oxide	AA AA
R 0434	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
R 0435	VRS-TV1JD472J	S	4.7K 1/10W Metal Oxide	AA AA
R 0436	VRS-TV1JD472J	S	4.7K 1/10W Metal Oxide	AA AA
R 0437	VRS-TV1JD472J	S	4.7K 1/10W Metal Oxide	AA AA
R 0500	VRS-TV1JD473J	S	47K 1/10W Metal Oxide	AA AA
R 0501	VRD-RA2HD102J	S	1K 1/2W Carbon	AA AA
R 0502	VRD-RA2HD182J	S	1.8K 1/2W Carbon	AA AA
R 0503	VRS-TV1JD472J	S	4.7K 1/10W Metal Oxide	AA AA
⚠ R 0504	RR-XZ0104BMZZ	S	2.2 1/3W Fuse Resistor 54DT25S	AB AA
⚠ R 0504	RR-XZ0109BMZZ	S	5.6 1/3W Fuse Resistor 37DT25S	AB AA
R 0505	VRS-TV1JD182J	S	1.8K 1/10W Metal Oxide	AA AA
R 0506	RR-XZ0100BMZZ	S	1 1/3W Fuse Resistor	AB AA
R 0507	VRD-RA2HD561J	S	560 1/2W Carbon	AA AA
R 0508	VRS-TV1JD330J	S	33 1/10W Metal Oxide	AA AA
R 0510	VRS-TV1JD153J	S	15K 1/10W Metal Oxide	AA AA
R 0511	VRS-TV1JD103J	S	10K 1/10W Metal Oxide	AA AA
⚠ R 0512	RR-XZ0109BMZZ	S	5.6 1/3W Fuse Resistor	AB AA
R 0513	VRS-TV1JD182J	S	1.8K 1/10W Metal Oxide	AA AA
R 0514	VRD-RA2BE103J	S	10K 1/8W Carbon	AA AA
R 0515	VRS-TV1JD821J	S	820 1/10W Metal Oxide	AA AA
R 0516	VRS-TV1JD472J	S	4.7K 1/10W Metal Oxide	AA AA
R 0518	VRD-RA2HD1R8J	S	1.8 1/2W Carbon 37DT25S	AA AA
R 0518	VRD-RA2HD1R5J	S	1.5 1/2W Carbon 54DT25S	AA AA
R 0519	VRS-TV1JD103J	S	10K 1/10W Metal Oxide	AA AA
R 0520	VRS-TV1JD222J	S	2.2K 1/10W Metal Oxide	AA AA
R 0521	VRD-RA2BE564J	S	560K 1/8W Carbon	AA AA
R 0522	VRS-TV1JD332J	S	3.3K 1/10W Metal Oxide	AA AA
R 0523	VRD-RA2BE473J	S	47K 1/8W Carbon	AA AA
R 0525	VRD-RA2BE102J	S	1K 1/8W Carbon	AA AA
R 0528	VRS-TV1JD184J	S	180K 1/10W Metal Oxide	AA AA
R 0529	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
R 0530	VRS-TV1JD332J	S	3.3K 1/10W Metal Oxide	AA AA
R 0531	VRS-TV1JD101J	S	100 1/10W Metal Oxide	AA AA
R 0532	VRD-RA2BE102J	S	1K 1/8W Carbon 37DT25S	AA AA
R 0532	VRS-TV1JD102J	S	1K 1/10W Metal Oxide 54DT25S	AA AA
R 0601	VRD-RA2BE123J	S	12K 1/8W Carbon	AA AA
R 0602	VRD-RA2HD331J	S	330 1/2W Carbon	AA AA
⚠ R 0603	RR-XZ0200BMZZ	S	1 1/2W Fuse Resistor	AB AA
R 0604	VRD-RA2EE6R8J	S	6.8 1/4W Carbon 37DT25S	AA AA
R 0604	VRD-RA2HD1R0J	S	1 1/2W Carbon 54DT25S	AA AA
R 0605	VRD-RA2EE5R6J	S	5.6 1/4W Carbon 37DT25S	AA AA
R 0605	VRD-RA2HD1R0J	S	1 1/2W Carbon 54DT25S	AA AA
R 0606	VRD-RA2HD2R2J	S	2.2 1/2W Carbon	AA AA
R 0607	VRD-RA2BE472J	S	4.7K 1/8W Carbon	AA AA
R 0608	VRD-RA2BE222J	S	2.2K 1/8W Carbon	AA AA
R 0609	VRN-VV3AB1R2J	S	1.2 1W Metal Film 37DT25S	AA AA
R 0609	VRN-VV3AB3R3J	S	3.3 1W Metal Film 54DT25S	AA AA
R 0610	VRD-RA2HD222J	S	2.2K 1/2W Carbon	AA AA
⚠ R 0611	RR-XZ0242BMZZ	S	3.3K 1/2W Fuse Resistor	AB AA
R 0612	VRS-TV1JD153J	S	15K 1/10W Metal Oxide	AA AA
R 0613	VRS-TV1JD101J	S	100 1/10W Metal Oxide	AA AA
R 0615	VRS-TV1JD153J	S	15K 1/10W Metal Oxide	AA AA
R 0616	VRD-RA2HD270J	S	27 1/2W Carbon	AA AA
R 0617	VRS-VV3DB470J	S	47 2W Metal Oxide	AA AA
R 0618	VRD-RA2HD102J	S	1K 1/2W Carbon	AA AA
R 0619	VRD-RA2HD270J	S	27 1/2W Carbon	AA AA
R 0620	VRD-RA2HD102J	S	1K 1/2W Carbon	AA AA
R 0621	VRS-TV1JD103J	S	10K 1/10W Metal Oxide	AA AA
R 0622	VRS-TV1JD153J	S	15K 1/10W Metal Oxide	AA AA
R 0623	VRS-TV1JD224J	S	220K 1/10W Metal Oxide	AA AA
R 0624	VRS-TV1JD474J	S	470K 1/10W Metal Oxide 54DT25S	AA AA
R 0624	VRS-TV1JD274J	S	270K 1/10W Metal Oxide 37DT25S	AA AA
R 0632	VRD-RA2HD471J	S	470 1/2W Carbon	AA AA
R 0633	VRS-TV1JD153J	S	15K 1/10W Metal Oxide	AA AA
R 0702	VRD-RA2HD224J	S	220K 1/2W Carbon	AA AA
R 0703	VRW-KP3HC5R6K	S	5.6 5W Cement	AC AB
R 0704	VRD-RA2HD564J	S	560K 1/2W Carbon	AC AB
R 0705	VRD-RA2HD564J	S	560K 1/2W Carbon	AC AB
R 0706	VRN-VV3ABR47J	S	0.4 1W Metal Film 37DT25S	AA AA
R 0706	VRN-VV3ABR27J	J	0.27 1W Metal Film 54DT25S	AA AA
R 0707	VRD-RA2BE221J	S	220 1/8W Carbon	AA AA
R 0708	VRD-RA2HD102J	S	1K 1/2W Carbon	AA AA
R 0709	VRD-RA2BE330J	S	33 1/8W Carbon	AA AA
R 0710	VRD-RA2HD561J	S	560 1/2W Carbon	AA AA
R 0711	VRD-RA2BE561J	S	560 1/8W Carbon	AA AA
R 0712	VRD-RA2EE561J	S	560 1/4W Carbon	AA AA
R 0713	VRS-TV1JD220J	S	22 1/10W Metal Oxide	AA AA
R 0714	VRS-TV1JD101J	S	100 1/10W Metal Oxide	AA AA
R 0715	VRS-TV1JD681J	S	680 1/10W Metal Oxide	AA AA
R 0716	VRS-TV1JD103J	S	10K 1/10W Metal Oxide 54DT25S	AA AA
R 0716	VRS-TV1JD273J	S	27K 1/10W Metal Oxide 37DT25S	AA AA
R 0717	VRS-TV1JD4R7J	S	4.7 1/10W Metal Oxide	AA AA
R 0718	VRS-TV1JD333J	S	33K 1/10W Metal Oxide	AA AA
R 0720	VRD-RA2BE223J	S	22K 1/8W Carbon	AA AA
⚠ R 0721	VRC-UA2HG825K	S	8.2M 1/2W Solid	AA AA
⚠ R 0722	VRC-UA2HG825K	S	8.2M 1/2W Solid	AA AA
R 0724	VRS-TV1JD471J	S	470 1/10W Metal Oxide	AA AA
R 0725	VRS-TV1JD222J	S	2.2K 1/10W Metal Oxide	AA AA
R 0729	VRD-RA2EE472J	S	4.7K 1/4W Carbon	AA AA
R 0801	VRS-TV1JD104J	S	100K 1/10W Metal Oxide	AA AA
R 0802	VRS-TV1JD221J	S	220 1/10W Metal Oxide	AA AA
R 0803	VRS-TV1JD4R7J	S	4.7 1/10W Metal Oxide	AA AA
R 0804	VRS-TV1JD393J	S	39K 1/10W Metal Oxide	AA AA
R 0805	VRS-TV1JD395J	S	3.9M 1/10W Metal Oxide	AA AA
R 0806	VRS-TV1JD2R2J	S	2.2 1/10W Metal Oxide	AA AA
R 0807	VRS-TV1JD221J	S	220 1/10W Metal Oxide	AA AA
R 0809	VRS-TV1JD101J	S	100 1/10W Metal Oxide	AA AA
R 0810	VRS-TV1JD101J	S	100 1/10W Metal Oxide	AA AA
R 0814	VRS-TV1JD101J	S	100 1/10W Metal Oxide	AA AA
R 0815	VRS-TV1JD101J	S	100 1/10W Metal Oxide	AA AA
R 0816	VRS-TV1JD101J	S	100 1/10W Metal Oxide	AA AA
R 0825	VRS-TV1JD682J	S	6.8K 1/10W Metal Oxide	AA AA
R 0834	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
R 0836	VRD-RA2BE681J	S	680 1/8W Carbon	AA AA
R 0837	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
R 0838	VRS-TV1JD821J	S	820 1/10W Metal Oxide	AA AA
R 0901	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
R 0902	VRD-RA2BE221J	S	220 1/8W Carbon	AA AA
R 0903	VRD-RA2BE470J	S	47O 1/8W Carbon	AA AA
R 0904	VRD-RA2BE221J	S	220 1/8W Carbon 37DT25S	AA AA
R 0904	VRS-TV1JD221J	S	220 1/10W Metal Oxide 54DT25S	AA AA
R 1001	VRS-TV1JD472J	S	4.7K 1/10W Metal Oxide	AA AA
R 1002	VRS-TV1JD472J	S	4.7K 1/10W Metal Oxide	AA AA
R 1003	VRS-TV1JD103J	S	10K 1/10W Metal Oxide	AA AA

REF. NO.	PARTS NO.	★	DESCRIPTION	EX SP
R 1004	VRS-TV1JD392J	S	3.9K 1/10W Metal Oxide	AA AA
R 1005	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
R 1006	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
R 1007	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
R 1008	VRS-TV1JD102J	S	1K 1/10W Metal Oxide 37DT25S	AA AA
R 1008	VRD-RA2BE102J	S	1K 1/8W Carbon 54DT25S	AA AA
R 1009	VRS-TV1JD391J	S	390 1/10W Metal Oxide	AA AA
R 1010	VRS-TV1JD391J	S	390 1/10W Metal Oxide	AA AA
R 1011	VRS-TV1JD391J	S	390 1/10W Metal Oxide	AA AA
R 1013	VRS-TV1JD561J	S	560 1/10W Metal Oxide	AA AA
R 1014	VRD-RA2BE104J	S	100K 1/8W Carbon 37DT25S	AA AA
R 1014	VRS-TV1JD104J	S	100K 1/10W Metal Oxide 54DT25S	AA AA
R 1015	VRD-RA2BE223J	S	22K 1/8W Carbon 37DT25S	AA AA
R 1015	VRS-TV1JD223J	S	22K 1/10W Metal Oxide 54DT25S	AA AA
R 1016	VRS-TV1JD101J	S	100 1/10W Metal Oxide	AA AA
R 1017	VRS-TV1JD473J	S	47K 1/10W Metal Oxide	AA AA
R 1018	VRD-RA2BE153J	S	15K 1/8W Carbon 37DT25S	AA AA
R 1018	VRS-TV1JD153J	S	15K 1/10W Metal Oxide 54DT25S	AA AA
R 1021	VRS-TV1JD223J	S	22K 1/10W Metal Oxide	AA AA
R 1022	VRS-TV1JD103J	S	10K 1/10W Metal Oxide	AA AA
R 1024	VRS-TV1JD101J	S	100 1/10W Metal Oxide	AA AA
R 1026	VRS-TV1JD103J	S	10K 1/10W Metal Oxide	AA AA
R 1027	VRS-TV1JD332J	S	3.3K 1/10W Metal Oxide	AA AA
R 1028	VRS-TV1JD332J	S	3.3K 1/10W Metal Oxide	AA AA
R 1029	VRS-TV1JD103J	S	10K 1/10W Metal Oxide	AA AA
R 1030	VRD-RA2BE392J	S	3.9K 1/8W Carbon	AA AA
R 1034	VRD-RA2BE153J	S	15K 1/8W Carbon 37DT25S	AA AA
R 1034	VRS-TV1JD153J	S	15K 1/10W Metal Oxide 54DT25S	AA AA
R 1035	VRS-TV1JD223J	S	22K 1/10W Metal Oxide	AA AA
R 1037	VRS-TV1JD103J	S	10K 1/10W Metal Oxide	AA AA
R 1038	VRS-TV1JD221J	S	220 1/10W Metal Oxide	AA AA
R 1039	VRS-TV1JD221J	S	220 1/10W Metal Oxide	AA AA
R 1041	VRS-TV1JD221J	S	220 1/10W Metal Oxide	AA AA
R 1048	VRD-RA2HD472J	S	4.7K 1/2W Carbon	AA AA
R 1049	VRD-RA2HD472J	S	4.7K 1/2W Carbon	AA AA
R 1056	VRS-TV1JD101J	S	100 1/10W Metal Oxide	AA AA
R 1058	VRS-TV1JD472J	S	4.7K 1/10W Metal Oxide	AA AA
R 1059	VRD-RA2HD472J	S	4.7K 1/2W Carbon	AA AA
R 1066	VRS-TV1JD103J	S	10K 1/10W Metal Oxide	AA AA
R 1068	VRS-TV1JD683J	S	68K 1/10W Metal Oxide	AA AA
R 1069	VRS-TV1JD682J	S	6.8K 1/10W Metal Oxide	AA AA
R 1070	VRS-TV1JD822J	S	8.2K 1/10W Metal Oxide	AA AA
R 1071	VRS-TV1JD682J	S	6.8K 1/10W Metal Oxide	AA AA
R 1072	VRS-TV1JD684J	S	680K 1/10W Metal Oxide	AA AA
R 1073	VRS-TV1JD222J	S	2.2K 1/10W Metal Oxide	AA AA
R 1075	VRS-TV1JD103J	S	10K 1/10W Metal Oxide	AA AA
R 1077	VRS-TV1JD472J	S	4.7K 1/10W Metal Oxide	AA AA
R 1078	VRS-TV1JD271J	S	270 1/10W Metal Oxide	AA AA
R 1079	VRS-TV1JD105J	S	1M 1/10W Metal Oxide	AA AA
R 1080	VRS-TV1JD332J	S	3.3K 1/10W Metal Oxide	AA AA
R 1081	VRS-TV1JD101J	S	100 1/10W Metal Oxide	AA AA
R 1082	VRS-TV1JD101J	S	100 1/10W Metal Oxide	AA AA
R 1083	VRD-RA2BE331J	S	330 1/8W Carbon	AA AA
R 1085	VRD-RA2BE101J	S	100 1/8W Carbon	AA AA
RJ 0001	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0002	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0003	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0005	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0006	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0008	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0009	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0010	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0011	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0012	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0013	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0014	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0017	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0018	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0019	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0021	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0022	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0023	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0024	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0025	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0026	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0028	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0029	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0031	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0033	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0034	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0035	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0037	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0040	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0041	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0042	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0043	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0044	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0045	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0047	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0049	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0053	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0063	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0065	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0066	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0067	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0068	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0070	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0071	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0072	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0073	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0074	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0075	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0080	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0082	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0100	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0112	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0118	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0120	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0121	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0122	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0123	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0124	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0125	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0127	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0128	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0131	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0132	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0136	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0137	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0138	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0139	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0140	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
RJ 0141	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA

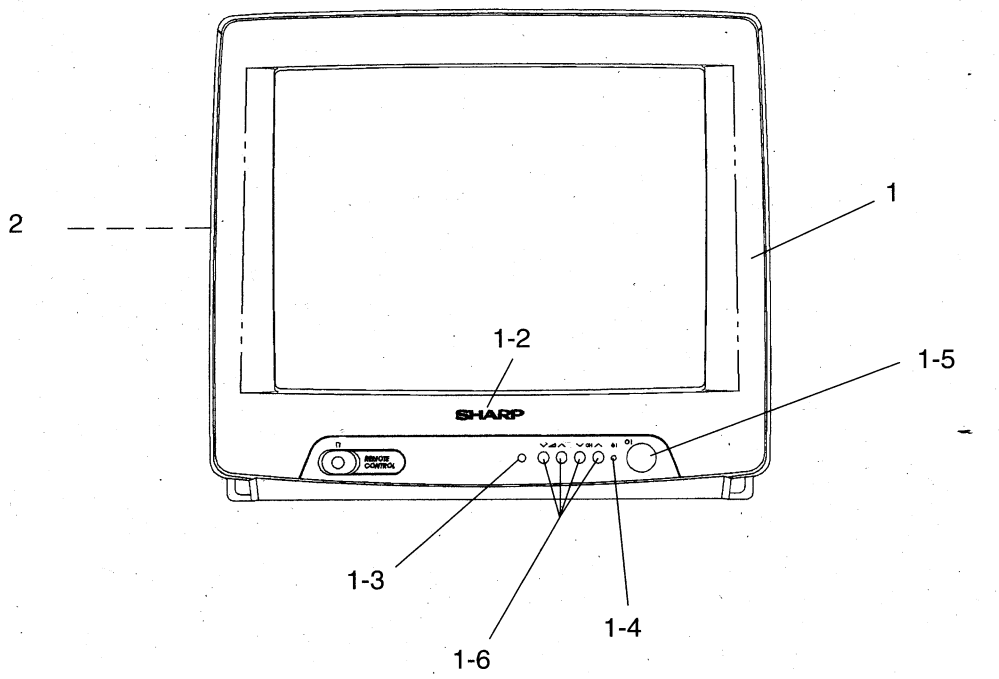
MISCELLANEOUS PARTS

⚠	F 0701	QFS-C3226CEZZ	S	Fuse 3.15A 250V	AE AC
	FH 1001	QFSHD1017CEZZ	S	Fuse Holder	AA AA
	FH 1002	QFSHD1018CEZZ	S	Fuse Holder	AA AA
⚠	S 0701	QSW-P0588CEZZ	S	Switch	AM AH
	S 1001	QSW-K0079GEZZ	S	Switch	AB AA
	S 1002	QSW-K0079GEZZ	S	Switch	AB AA
	S 1003	QSW-K0079GEZZ	S	Switch	AB AA
	S 1004	QSW-K0079GEZZ	S	Switch	AB AA
		QSOCZ2107BMZZ	S	A / V Connector	AE AF
	RMC0001	RRMCU0222CEZZ	S	R/C Receiver	AG AD
	J 0301	QJAKJ0047CEZZ	S	Earphone Jack	AG AD
	FB 0301	RBLN-0037CEZZ	S	Ferrite Bead	AB AB
	FB 0304	RBLN-0037CEZZ	S	Ferrite Bead	AB AB
	FB 0351	RBLN-0037CEZZ	S	Ferrite Bead	AB AB
	FB 0601	RBLN-0037CEZZ	S	Ferrite Bead	AB AB
	FB 1001	RBLN-0037CEZZ	S	Ferrite Bead	AB AB

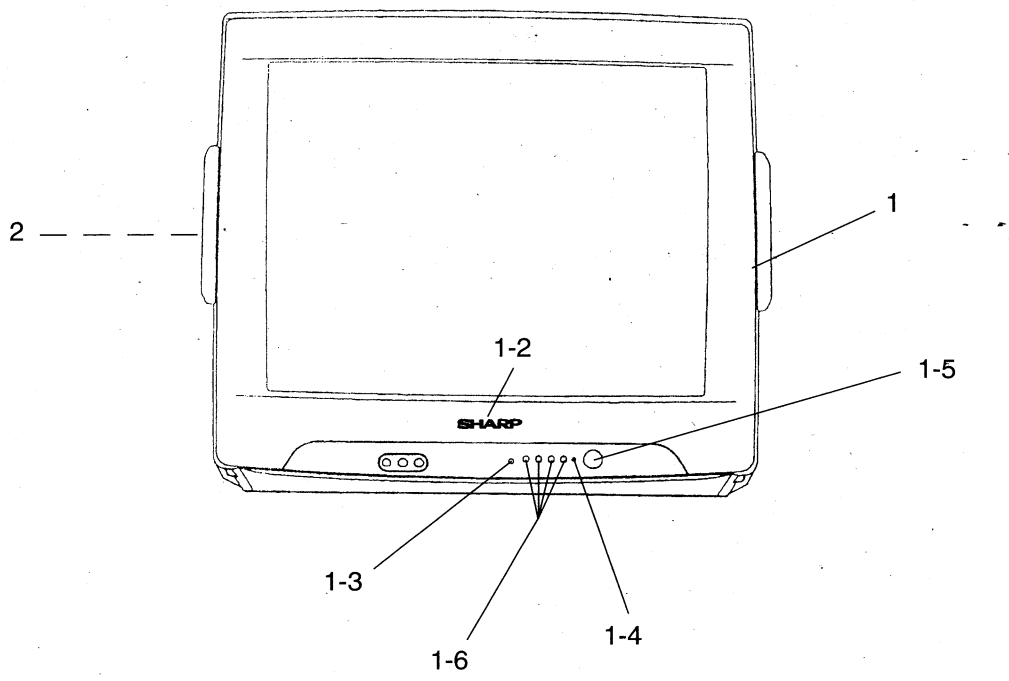
REF. NO.	PARTS NO.	★	DESCRIPTION	EX SP
FB 1002	RBLN-0037CEZZ	S	Ferrite Bead	AB AB
P 0601	QPLGN0505CEZZ	S	Connector	AB AB
P 0701	QPLGN0304CEZZ	S	Connector	AB AB
P 0702	QPLGN0207CEZZ	S	Connector	AA AA
P 0851	QPLGN0461CEZZ	S	Connector	AA AA
	QPLGN0241CEZZ	S	Connector	AA AA
SOCKET UNIT				
TRANSISTORS				
Q 0870	RH-TX0181BMZZ	S	BF422	AB AA
Q 0871	RH-TX0181BMZZ	S	BF422	AB AA
Q 0872	RH-TX0181BMZZ	S	BF422	AB AA
Q 0883	RH-TX0180BMZZ	S	BF421	AB AA
Q 0885	RH-TX0180BMZZ	S	BF421	AB AA
Q 0887	RH-TX0180BMZZ	S	BF421	AB AA
DIODES				
D 0811	RH-DX0045BMZZ	S	1N4148	AA AA
D 0812	RH-DX0045BMZZ	S	1N4148	AA AA
D 0880	RH-DX0045BMZZ	S	1N4148	AA AA
D 0881	RH-DX0045BMZZ	S	1N4148	AA AA
D 0882	RH-DX0045BMZZ	S	1N4148	AA AA
COILS				
L 0881	VP-CF120K0000	S	12μH	AC AB
CAPACITORS				
C 0871	VCCSTV1HL471J	S	470p 50V Ceramic	AA AA
C 0872	VCCSTV1HL471J	S	470p 50V Ceramic	AA AA
C 0873	VCCSTV1HL471J	S	470p 50V Ceramic	AA AA
C 0874	VCKYPA2HB102K	S	1000p 500V Ceramic	AA AA
C 0876	RC-KZ0023CEZZ	S	4700p 2KV Ceramic	AD AD
C 0878	VCEAGA2DW106M	S	10 200V Electrolytic	AD AB
C 0880	VCCSTV1HL471J	S	470p 50V Ceramic	AA AA
C 0881	VCCSTV1HL471J	S	470p 50V Ceramic	AA AA
C 0882	VCCSTV1HL471J	S	470p 50V Ceramic	AA AA
RESISTORS				
R 0879	VRS-TV1JD471J	S	470 1/10W Metal Oxide	AA AA
R 0880	VRS-TV1JD471J	S	470 1/10W Metal Oxide	AA AA
R 0881	VRS-TV1JD471J	S	470 1/10W Metal Oxide	AA AA
R 0882	VRS-VV3DB153J	S	15K 2W Metal Oxide	AA AA
R 0883	VRC-MA2HG272K	S	2.7K 1/2W Solid	AA AA
R 0884	VRS-VV3DB153J	S	15K 2W Metal Oxide	AA AA
R 0885	VRC-MA2HG272K	S	2.7K 1/2W Solid	AA AA
R 0886	VRS-VV3DB153J	S	15K 2W Metal Oxide	AA AA
R 0887	VRC-MA2HG272K	S	2.7K 1/2W Solid	AA AA
R 0888	VRS-TV1JD471J	S	470 1/10W Metal Oxide	AA AA
R 0892	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
R 0893	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
R 0894	VRS-TV1JD102J	S	1K 1/10W Metal Oxide	AA AA
R 0895	VRS-TV1JD471J	S	470 1/10W Metal Oxide	AA AA
R 0896	VRS-TV1JD471J	S	470 1/10W Metal Oxide	AA AA
R 0898	VRS-TV1JD471J	S	470 1/10W Metal Oxide	AA AA
R 0899	VRS-TV1JD471J	S	470 1/10W Metal Oxide	AA AA
RJ 0081	VRS-TV1JD000J	S	0 1/10W Metal Oxide	AA AA
MISCELLANEOUS PARTS				
⚠ SC 0881	QSOCV0842CEZZ	S	C.R.T. Socket 37DT25S	AG AD
⚠ SC 0881	QSOCV0103BMZZ	S	C.R.T. Socket 54DT25S	AG AD

REF. NO.	PARTS NO.	★	DESCRIPTION	EX SP
MISCELLANEOUS PARTS				
⚠	QACCZ2100BMSA	S	AC Cord	AR AH
	RRMCG1060BMSA	S	Remote Control Unit	AU AM
	TINS-6478BMN0	S	Operation Instructions	AN AG
	QANTR0081CEZZ	S	Antenna 37DT25S	AP AP
	VSP0080PBL6YS	S	Speaker 2W 32ohms 37DT25S	AK AE
	VSP0010PBQ4WA	S	Speaker 54DT25S	AR AK
CABINET PARTS				
1	CCABA1190BMV0	S	Front Cabinet 37DT25S	AX AQ
1	CCABA1189BMV0	S	Front Cabinet 54DT25S	
1 - 2	HBDGB1017BMSA	S	Badge SHARP 37DT25S	AC AB
1 - 2	HBDGB3509BMSA	S	Badge SHARP 54DT25S	AC AB
1 - 3	HDECQ0021BMSA	S	Window R/C 37DT25S	AB AA
1 - 3	HDECQ0023BMSA	S	Window R/C 54DT25S	AB AA
1 - 4	HDECQ0022BMSA	S	Window Power 37DT25S	AB AA
1 - 4	HDECQ0024BMSA	S	Window Power 54DT25S	AB AA
1 - 5	JBTN-1038BMSA	S	Button Power 37DT25S	AB AA
1 - 5	JBTN-1040BMSA	S	Button Power 54DT25S	AB AA
1 - 6	JBTN-1039BMSA	S	Button Up/Down 37DT25S	AC AB
1 - 6	JBTN-1041BMSA	S	Button Up/Down 54DT25S	AD AB
2	GCABB1067BMKA	S	Rear Cabinet 37DT25S	AU AM
2	GCABB1069BMKA	S	Rear Cabinet 54DT25S	BA AT

37DT-25S



54DT-25S



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PRINTED IN SPAIN

10/97 RAFTIIC